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Society Reports.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF CINCINNATI.

Stated Meeting, Jan. 8, 1885.

The President, Dr. C. O. Wright, in the Chair.

The Propriety of Trachelorrhaphy.

Dr. Gustav Zinke, introducing the subject for discussion, said:

While at Washington, D. C., attending the meeting of the American Medical Association, I listened to an interesting paper on the subject of Emmet's operation, by Dr. Taber Johnson. The discussion which followed was a surprise to me. There were those who favored the propriety of the operation in every case in which the laceration of the cervix was manifest; those who regarded it necessary only in cases of extensive tears — with eversion and other pathological changes in the cervix itself—and those who thought it a procedure or operation wholly uncalled for. I do not now remember the names of all who took part in this discussion, nor the exact words that were used, but enough impressed itself upon my mind to convince me that not even the gynecologists are in harmony respecting the necessity of this operation, and that its sphere of usefulness was not only not exactly defined, but even doubted. Having performed the operation several times myself with good results, and always acting under the belief that the operation was plainly indicated and absolutely necessary in nearly all lacerations of the cervix, I concluded that it was an operation not only curative but preventive in character. It is not my purpose in introducing this subject this evening to speak decisively or authoratively. My sole desire is to elicit a discussion that shall show the opinion of the Society, and for that purpose I shall describe to you briefly the class of cases in which I thought the operation a legitimate one.

Class 1. All those in which the laceration extends to the cervico-vaginal junction, providing the patient be young or not near the menopause.

Class 2. All those in which the laceration has caused certain pathological conditions—as eversion, subinvolution, cervical endo-metritis, excoriation, partial prolapsus—if the patient has not passed or is not near the menopause, and palliative measures prove unsuccessful.

Class 3. All those cases in which the lacerated cervix is attended by prolapsus uteri past the first degree, eversion, cervical and corporeal endo-

metritis, granulation, etc., no matter whether the patient has passed the menopause or not, if that her age and general state of health will permit.

In class first the operation is indicated, and, I believe, justifiable, simply as a preventive measure. If a lacerated cervix is the cause of all the evils the text-books attribute to it (and my experience has taught me to believe these consequences to be facts) then we are in duty bound to restore the parts to their normal condition.

What is true of the first class holds good in the second, only palliative measures should be instituted first, and if they render the patient permanently comfortable, happily, an operation may not be necessary, but if necessary, operate! the sooner the better. It is this second class of cases which furnishes lucrative material for the specialist. If permitted to go without the operation patients usually improve for a while and then fall back into the former condition. Finally, after years of suffering, and having made the rounds among the gynecologists, the patient is operated upon, with the result not nearly so flattering as if it had been done earlier. Sometimes the health has become so poor and lastingly undermined by years of suffering that an operation is out of the question. Why, then, not operate as soon as you learn of the trouble?

The third class needs no words of explanation to those familiar with the treatment of such cases, and those who doubt its value will, I think, in time become convinced if they try to cure without the operation. I certainlo never saw a case in my own or any body's private or clinical practice in which satisfactory results were obtained without the operation. It is here, however, that occasionally we meet with an extensively lacerated cervix with eversion, and no pathological changes of much moment. Such a case came recently into my care. The woman was fifty-four years of age, her youngest child being over twenty. She had passed the menopause, but she came with a history of years of suffering, which had abated after the menopause was completed. But what brought her to my office? Backache and leucorrhœa. Two week's treatment, consisting of copious warm water injections and the application of a tampon saturated with glycerine and boric acid rendered her comfortable. Will she remain so? I doubt it, but time will tell. Had she been operated on years ago, much suffering, much trouble, much health and *money* might have been spared, and who can tell whether after all an operation will not become necessary?

During that discussion it was said that "even Emmet himself had repudiated his operation." That is a mistake. He has modified much of that which he claimed for his operation in the beginning, but he still believes in its efficacy, and performs it quite often.

In his textbook, Dr. Thomas, in speaking of the deleterious effects of a lacerated cervix, mentions epithelioma as the one most to be feared. He says: "No part of the body of a woman is so liable to the development

of cancer as the uterus; no part of the uterus so liable as the neck, and no tissue of the neck so liable to it as the glandular lining membrane." If this alone is true I do not see how my remarks introducing this subject to you can be successfully contradicted.

DISCUSSION.

Dr. Trush said he had listened with much interest to the essayist's remarks upon this now so fashionable operation—trachelorrhaphy. It was performed, apparently, in all cases willing to submit to the operation; for *good cause*, unquestionably, in some; in others for *supposed* cause; and in still others, it seemed to him, simply because the operation was in fashion. And the success—was generally reported "favorable," or "all that could be desired."

It was a wonder to him how child-bearing women managed to exist at all prior to the introduction of this operation, and yet we had to admit that somehow they did get along, perhaps as well then as now.

As the essayist had divided cases requiring trachelorrhaphy into three classes he would proceed to notice these seriatim.

In class 1, laceration had taken place but had healed so well that no morbid symptoms were present save only some fissuring about the os, of varying depth, unilateral or bilateral, etc. For obvious reasons cases of this class were usually discovered accidentally. The operation here was recommended as a prophylactic measure; pathological changes and morbid symptoms "*might*" later supervene; the fissure or fissures might become the seat of cancerous degeneration, and were liable to give rise to pelvic cellulitis. This, certainly, he thought, was looking a good way ahead. For his part, he should let these cases alone. He failed to see in the "possible" eventualities mentioned adequate cause for the operation; it was time enough to operate when morbid symptoms did present themselves.

Class 2 comprised those cases where in addition to fissuring, as in class 1, localized inflammation and leucorrhœa were present, together with some constitutional disturbance, but no *eversion* of the cervical lips. The operation in this class was thought necessary for the relief of the local inflammation and its train of morbid symptoms, but more particularly to obviate the danger of uterine cancer and pelvic inflammation to which the lesion was said to predispose. Respecting this class, although he could not concede the unquestioned necessity of the operation, he saw no special objection to its performance at the very inception of treatment. In his own practice he should have recourse first to milder measures of treating the cervical inflammation, not omitting suitable constitutional treatment, and only in the event of failure of these means, within a reasonable time should he resort to trachelorrhaphy.

The contingent of class 3, finally, was made up of cases characterized not only by deep fissuring, with localized inflammation and copious dis-

charge, but also by *eversion* of the labia of the os tincæ, by hyperplasia, and by marked constitutional disturbance. These cases, it was held, required the operation for the relief of the local as well as the general morbid phenomena, quite independently of the greatly augmented danger of cancer of the cervix, of pelvic cellulitis, and the tendency to abortion, which it was averred was in store for them.

In this instance he, Dr. Trush, could fairly agree with the essayist as regards the necessity of operative interference. Nothing would so effectually cure the eversion, and incidentally, also relieve the hyperplasia, as a trachelorrhaphy; the profuse discharges likewise, he believed, were thereby greatly diminished, if not entirely arrested. To remove thus, almost at a single blow, two most potent sources of local and constitutional disturbance, was ample justification, it seemed to him, for the performance of this operation, leaving out of sight entirely any fear of cancer, etc. If this condition really did predispose to cancer, to pelvic inflammation and abortion, these of course would constitute so many additional and weighty reasons for the operation. A few words right here respecting the predispositions in question: The danger of cancerous degeneration of the lacerated and *everted* cervix had been held up as very great indeed; less so in the other two classes of the essayist, but still none the less real. It had always seemed to him that this danger had been made unduly prominent. If really cervical lesions were so potent as to cause cancer of this part as claimed, how was it that childbearing women, prior to the introduction of trachelorrhaphy did not fall a prey to this disease in vastly larger numbers than recorded, seeing that the immense majority of these women are the bearers of cervical rents? Was it not a fact that heredity played a far more important role in the ætiology of uterine cancer than the laceration in question? Given the hereditary tendency, then the laceration might serve as an exciting factor, and in such individuals ought to be recognized as an element of danger and dealt with accordingly. Cancer of the cervix was, however, by no means confined to those afflicted with lacerations, on the contrary it was encountered in the parous woman without lacerations, and even in the nullipara. That deep lacerations predispose to pelvic inflammation he did not doubt, still they formed only one link in a long chain of aggravating circumstances, and it was scarcely possible to determine the precise share which each bore in the development of these disorders.

Dr. Giles S. Mitchell said that if an un-united laceration of the uterine cervix indicates sooner or later the long train of evils pointed out by the essayist, *i.e.*, chronic peri-uterine cellulitis, epithelioma, subinvolution of a part or the whole uterus, sterility, menstrual disorders, cervical endometritis, granular and cystic degeneration, fungosities of corporeal endometrium, neuralgia of cervix, dyspareunia, tendency to abortions, uterine displacements, etc., he could see no reason for his classification. It

seemed to him in view of these evil consequences, that the indications for trachelorrhaphy are, a torn or lacerated cervix. He could see no reason for delaying the operation until pathological changes supervened, but deemed it not only the privilege but the duty of every gynecologist to insist upon restoring the parts as soon as the lesion is detected. The operation is attended by little or no danger and is not difficult of performance. Speaker had witnessed the operation more than a hundred times, and had often made it himself. He remembered but one case where the patient's life was imperiled by it. As to the frequency of the accident, he was sure it occurred oftener than most physicians are wont to believe. Many of the lacerations are in the anterior or posterior lip and are held together by the vaginal walls, and in consequence unite by first intention and are never recognized. Simpson declared that evidence of a certain degree of laceration is given by almost every careful autopsy of women after delivery, whether assisted or not assisted during their labor. Emmet says one-half of the ailments in women who have borne children are to be attributed to laceration of the cervix. Goodell estimates that about one out of every six women suffering from uterine troubles has an un-united laceration of the cervix.

In view of the great frequency of the accident speaker thought it the duty of every practitioner to make careful examination of his parturient cases eight or ten weeks after delivery. If a laceration is detected, operate as soon as the parts are in proper condition. Don't wait until the woman's health is broken or important pathological changes have supervened. Since laceration of the cervix may occur, it matters not how carefully or skillfully attended the woman may be; it is simple justice to announce to the victim of this accident that her physician was in no way responsible for it.

Dr. Cleveland remarked that as a general practitioner he had observed the tendency of all specialists to look on patients from the standpoint of their own line of work. He thought this especially true of the gynecologists, an exemplification of which we find in the extreme views held by most of them on the subject of trachelorrhaphy. If the gynecologist is right, then the profession in general is very much out of the way. As a matter of fact it is not to be expected that a general practitioner would be as good a judge of these matters as the specialist.

The recommendation of Dr. Mitchell that the physician examine every patient after recovery from labor, was very good theoretically, but practically it would be very laborious and often impracticable. If it is so necessary that this operation be performed, might it not be well to go a step farther and make the primary operation, as in case of a lacerated perineum. He had seen cases operated on where it was really difficult to recognize that there had been a laceration at all. He had seen the same condition of eversion and induration in the primipara, but he was not

prepared to say that even here it would not be good practice to remove the indurated portion.

Dr. Palmer said that the last speaker had made two very sensible remarks: one, when he remarked that the specialist viewed his patients from his special standpoint; the other, that the general practitioner was an incompetent judge as to the propriety of special operations. The former sometimes favored these operations when they might be avoided, and the latter still more frequently discountenanced them when really necessary. A middle ground was the correct one.

Without any doubt, the operation for laceration of the cervix has been overdone, especially in certain quarters. Yet there are prominent gynecologists and obstetricians, especially abroad, who have never appreciated its place and importance. Dr. Emmet, who originated the operation, has realized the unnecessary frequency with which trachelorraphy has been performed, and so expressed himself. Performed it has been, for slight lacerations, without special symptoms, when topical treatment of a mild character would suffice.

These remarks are not to be construed as expressing an opposition on the part of the speaker to the operation in proper cases, for trachelorraphy properly done, in well selected cases, has been proven to be one of the greatest boons to suffering women. The classification given us by Dr. Zinke is a good one.

If a laceration is deep, and especially bi-lateral or stellate, an operation is indicated, whether any pathological symptoms are present or not. If symptoms are present, the indication is more decided for prompt interference, so soon as a preparatory treatment can put the parts in a proper condition therefor. If none, the indication still holds, for the rule is that, sooner or later, they will manifest themselves. It is merely a question of time for deep lacerations, especially double, to produce some morbid physical change in the cervix, in its size, shape, and secretion; the lips rolling out, becoming enlarged, eroded, while later on taking on granular degeneration. The follicles become increased in number and size, and there is added a follicular degeneration. The bottom of the rent fills up, if it has not already, with hard cicatricial tissue, itself a source of irritation, creating local pain and reflex disorders, and physically acting as a wedge to increase the cervical separation and resulting eversion. The uterine cavity becomes diseased secondarily, taking on a fungoid degeneration. The uterus becomes displaced. Emmet has placed much stress upon the occurrence of pelvic cellulitis, as a result of laceration of the cervix, showing how it may lead to serious displacement, and otherwise complicate matters. He has warned us as to the care and time required to subdue it, before trachelorraphy is undertaken.

Now, these are some of the results of a bad laceration. They are results, all of which may follow in turn and time in any individual case.

Many of them will almost inevitably come on, and it is for their prevention, that the operation for a bad laceration may be needed. No one denies the possibility of such results of lacerations, although some contend that the operation of Emmet is not called for in their relief. In the speaker's judgment, while almost all of these patients can be benefited to a considerable degree by topical and constitutional treatment, without any operation, nevertheless the improvement will continue only to a certain point, and the condition will then remain stationary. Moreover, relapses are almost sure to take place without the operation, for the real, underlying cause has not been removed; the effects only need time to be reproduced again.

Now, there is a class of cases—not few in number—in which to an inexperienced touch and eye, there has been no laceration and eversion, and in which, it may be contended, there is no need of operative interference.

These are cases in which the bottom of the rent has filled up with cicatricial tissue, and the whole, everted, now infra vaginal face of the cervix, has lost its eroded granular appearance, become cicatrized, and covered, as it were, with an improvised mucous membrane. But touch carefully made, reveals the mush-room shaped cervix, probably also a deep seated cystic degeneration. The cervical walls are just as much everted in these as in other cases, and the need of trachelorraphy is as great. These patients are not comfortable. They suffer with chronic metritis; the uterus after a while becomes sclerosed. They are sufferers with manifold reflex disturbances. Here, the cicatricial tissue should all be cut out, when the everted edges can be approximated.

It was Breisky of Berne, Switzerland, who first drew attention to the association of laceration of the cervix and epithelioma, as cause and effect. Many other observers have substantiated his view. There is mmch clinical history which could be advanced in proof of it. For instance, it is well known that cancer of the cervix (the seat of laceration), is extremely rare in virgins or in nullipara of any age. If malignant disease is present in the uterus of such, it is as often present in the body of the organ as in the cervix.

Almost all—or at least the vast majority—of cancers of the cervix are present in women who have given birth to children—women who probably have had some degree of cervical laceration.

The speaker said he could not call to mind a single case that he had witnessed of beginning cancer of the cervix in a nullipara. He had encountered several cases of cancers of the corpus uteri in such women; none of the cervix. They exist, of course, but it must be admitted that, they are very rare. The possibility, the danger, then, of the superventionof epithelial cancer upon a lacerated cervix, is another argument for a well-timed operation.

Extensive lacerations, with everted and gaping flaps, doubtless favor

the occurrence of abortion. A split cervix destroys the retentive power of this part of the uterus, besides with its sequelæ being a constant source of irritation to provoke uterine contraction Such much, then, for the conditions of the case calling for relief, indicating the advisability of trachelorraphy.

Again: an operation is indicated if unattended with special dangers, it holds forth strong and reasonable prospects of relief and cure.

Trachelorraphy is not a dangerous operation. What we are most to dread is the possibility of the existence of a latent pelvic cellulitis. Patients who have once had this disease are quite susceptible to a recurrence. It may be that some remnants of the old trouble still are present. The existence of a pelvic cellulitis—a search should always be made for its presence—would contra-indicate an operation. It is the dragging upon the uterus to bring it within the base of manipulation and to steady it, that relights or sets up these para-metritic inflammations. In a single case only, had the speaker had any trouble after this operation.

A sharp attack of pelvic inflammation was set up on the fourth day by the patient getting out of bed without cause and contrary to instructions. Recovery, however, followed, and the result of the operation was not impaired by the attack.

In properly selected cases, the operation well done and succeeding well, produces most excellent results. It may succeed, yet the patient may not be altogether, or at all relieved. Probably it is because it has been deferred too long,—until secondary changes in the uterus and the ovary have become fixtures. This would lead us to consider the question, does trachelorraphy lead to sterility? It may, or may not. It may not only not impair the chances of fertility, but to a great degree, enhance them. The operation done, leaving a very small os externum and narrow cervical canal, will doubtless cause sterility; but with the normal restoration of the cervix in its walls and canal, in their proper relation and size, it will not, cannot diminish any woman's chances to fecundation. When sterility has not existed before, and follows an operation on the cervix, it may be owing to a resulting stenosis; and when it persists after having been present before, it will be owing to a permanancy of secondary lesions which have followed in their train upon the original laceration.

Dr. Mitchell has referred to the frequency of lacerations of the cervix. Doubtless he is correct in estimating that the accident occurs in the majority of first deliveries. But many of them are slight, heal, and no harm follows. Deep lacerations also not infrequently heal, by first intention or granulation, leaving no special deformity, especially if the recumbent posture is maintained longer than the ordinary period, and the patient is kept clean by frequent injections of hot carbolized water. Especially are these lacerations along the anterior and posterior lips likely to heal, leaving no

trace of the rent. To a great extent, the frequeucy of lacerations is based upon the conditions found months and years subsequent to the accident, not estimating those which have healed spontaneously, or aided by posture and cleanliness. Therefore, in view of the above facts, the importance of the detection of these lacerations at the time of its occurrence, is apparent.

Dr. Trush in reply to Dr. Palmer, remarked that he had no statistics at hand and could not, just now, recall cases of cancer in nulliparous women, except one, and this was at present under his professional care.

Dr. Zinke in closing the discussion, said that he had introduced this subject in order to get the opinion of the Society that he might thereby form more correct views of his own.

The question has been asked, "Why cancer occurs as frequently today as in former times?" His answer is that we have no proof of that. Who has been able, so far, to demonstrate that cancer, springing from any portion of the cervix, occurs as frequently today as formerly? I do not believe it does. If as many cases are found now, is it not possible that formerly many a case of cancer of the uterus remained unrecognized and that death was attributed to other causes? Who does not know that it is only of late that we are permitted to carry on examinations of the female genital organs to a successful extent, and that it was an almost criminal offence in former times even to suggest the need of an examination?

From the drift of the discussion tonight, he was to some extent enabled to make up his mind what his course in the future should be. It is evident that there are two modes of procedure: one, the palliative, the other, the curative. His advice to patients then shall be, if you wish to be cured an operation is necessary; if you desire to be relieved only for an indefinite time, you can be accomodated. Still he could not see why we should delay an operation which, if performed at once, would relieve the patient of all risks.

Election of Officers.

The following officers were chosen for the ensuing year.

President.—Dr. A. J. Miles.
Vice Pres.—Dr. Giles S. Mitchell.
Record. Secy.—Dr. Clara M. Ellsbury.
Correspond. Secy.—Dr. James G. Hyndman.
Treas. and Libr.—Dr. Geo. E. Jones.

Dysmenorrhœa—Ointment of Cocaine.—In a case of this nature, very sensitive to the use of a sound, by lubricating the instrument with cocaine ungt., there was no further trouble in its passage.

In Vienna the illegitimate births are about forty per cent.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Friday, January 2, 1885.

The President, R. A. CLEEMAN, M.D., in the Chair.

DOUBLE UTERUS AND VAGINA.

Dr. Wm. Goodell described a case which had been sent to him on account of pain in the back, various nervous symptoms and difficult coition. The vagina was double throughout its entire length. Entrance had apparently been effected on either side of the septum. The cervices were united like the barrel of a double-barreled gun. There was a slight divergence of the upper third of the fundus. The sound entered three inches into each cavity. The septum vagina was divided up to the cervix and her physician reports great relief to the general symptoms.

Dr. C. McClelland described a similar case. Pregnancy had progressed to the third month when the case came under his observation. The vaginal septum was complete. The external contour of the cervix was normal, but a thin septum extending from the os to the fundus divided the cavity into two parts. The prominence of the uterus was greater on one side of the abdomen. The sound was not passed. The vaginal septum was divided shortly before labor. A living child was delivered. About the third day after delivery, a mass, apparently of decidua, was thrown off after three or four hours of labor pains. After involution was complete, sounds were introduced into the uterine cavities and the handles diverged one and three-fourths inches. A second conception occurred afterward on the other side of the uterus.

Dr. Goodell some years ago had under his care a case which he at first diagnosticated as an extra-uterine pregnancy, as he apparently found the uterus empty, passing the sound into it, while undoubted signs of pregnancy existed. The fetal tumor was larger toward one side of the abdominal cavity, while the uterus was deflected to the other side. He saw the patient every two weeks and made frequent careful examination. He sent the patient to the University Hospital and fixed a day for operation. One day while lecturing on the case, he had his hand on the abdomen of the patient and felt a contraction and hardening under his hand. This so resembled the action of uterine tissue, that he sent the patient to the Preston Retreat for observation. She was delivered spontaneously.

There was but one cervix, and one os, but there was a uterine septum, higher up, dividing the cavity into two parts.

Dr. Harris remarked that the observer, in these cases, is liable to be deceived because the enlargement of the uterus causes it to rotate, the empty half of the uterus admitting the sound in the median line. The uterus too is generally poorly developed, as this form of uterus is probably the result of arrest of development, and its thin walls do not give, to the palpitating hand, the normal sense of thickness and resistance.

DOUBLE OVARIOTOMY WITH UNUSUAL COMPLICATIONS.

Dr. W. H. Parrish reported the following case: In September, 1884, I saw in consultation with Dr. M. O'Hara, a lady who had been under his treatment for a number of months. She was fifty-two years of age and of exemplary habits. The menopause had been established for a number of years and she had enjoyed good health until a few months ago. In June, 1884, she noticed for the first time that her abdomen was enlarged. In July she consulted Dr. O'Hara, narrating symptoms of indigestion. In August the abdomen had become so enlarged as to occasion concern on the part of the patient and she had submitted to an examination by Dr. O'Hara. About August 15th, Dr. DeF. Willard saw her in consultation with Dr. O'Hara and the diagnosis of ovarian tumor was coincided in. On September 6th, I saw the patient with Dr. O'Hara and also diagnosticated ovarian tumor. The physical signs were the usual ones characteristic of ovarian tumor. There was distinct resonance in each flank, and no indication of fluid in the peritoneal cavity. The abdominal distension had become very considerable, occasioning no little interference with respiration, and was associated with slight œdema of the lower extremities and general emaciation. Removal by operation was urged upon the patient, but was positively refused. After the lapse of ten days I again saw her with Dr. O'Hara. The difficulty in respiration had so greatly increased as to prevent sleep except in the semi-erect position. But little nourishment had been taken and exhaustion had correspondingly increased. In the erect position the pulse was 160 per minute, in recumbency 130. The abdomen measured forty-five inches at the umbilicus. Its shape had changed since my previous visit. In the flanks there was distinct bulging with fluctuation and percussion dullness. I diagnosticated peritoneal dropsy as a complication of the ovarian cyst. The œdema of the lower extremities had increased. The patient had requested that she be tapped, and it was with reluctance that I consented to resort to that measure. On Sept. 14th, with the assistance of Dr. O'Hara and J. B. Roberts, I attempted to diminish the size of the abdomen by tapping the cyst, using for that purpose the ordinary trocar and cannula. Only a few drops of thick gummy substance was obtained. The cyst contents were too thick, too jelly-like, to run through the canula. But a single puncture was made. The patient now gave her consent to the performance of ovariotomy.

Sept. 16th. The patient has been fed and stimulated as her condition demanded or permitted. Pulse 120; respiration 40; temperature 98¾° F. As yet no apparent disturbance from the tapping.

Sept. 17th. Pain referred by the patient to the bowels; three movements, probably resulting from indigestion.

Sept. 18th. Operation performed. Previous to the operation, pulse 130; respiration 40; temperature 99° F.; tongue dry and brown. Bowels

moved twice during the night. Still has pain; supposed by the patient to be in the bowels. There were present Drs. O'Hara, A. H. Smith, J. B. Roberts and McElroy. The patient was etherized by Dr. Roberts, and the usual incision along the linea alba was made. The tumor was found to be adherent to the anterior abdominal wall. An attempt was made to break up these adhesions, but the cyst-wall was so extremely thin that the cyst was soon torn into. Its contents were too gummy to flow and it was necessary to scoop out this substance with the hand. The contents had the consistence and appearance of calvesfoot jelly and was adhesive like gum, sticking to the hand so that it was necessary to strip it from one hand with the other. There were numerous slight adhesions to the intestines, but as the cyst wall was so extremely thin these adhesions were not troublesome, portions of the cyst wall being left attached to the intestines. It was soon discovered that the cyst wall had ruptured prior to the operation and that every portion of the peritoneal cavity contained quantities of the colloid material and masses of dark grumous blood. The contents had doubtless escaped gradually from a rent in the upper posterior portion of the cyst several days before the tapping. It was the presence of this material in the peritoneal cavity that led me to diagnosticate the co-existence of peritoneal dropsy. There was no serum in the peritoneal cavity. Washing the peritoneal surface with water would not remove the colloid material and it became necessary with hand and sponge to remove it from the under surface of the liver, from about the spleen and kidneys as well as from the intestines. After emptying the large tumor, it was discovered that there was a smaller one about the size of a fetal head, unbroken and without adhesions and partly pressed into the pelvis by the superincumbent large one. The two tumors presented the same characteristics. They had thin transparent walls with numerous internal alveolæ and thin septæ, with gummy colloid contents. About the base of each, but especially of the larger, there was a limited amount of solid substance. The pedicle of each was ligated and dropped into the abdomen. Each tumor evidently grew from an ovary. The general peritoneum, wherever it could be seen or felt, presented innumerable cysts with walls and contents like those of the ovarian cysts. These peritoneal cysts varied in size from that of a millet seed to that of a pea. Many of the larger ones were ruptured by the hand or sponge. These minute cysts were not arranged in clusters with stem-like attachments to the peritoneum, but were isolated and had the appearance of blebs on the peritoneal surface. The peritoneum presented general injection of its capillaries with slight roughening of its surface, but there were no evidences of active or decided peritonitis. The hemorrhage was but trifling and but few ligatures were applied. The abdominal incision extended about an inch above the umbilicus. A glass drainage-tube was

introduced at the lower angle of the wound and the remainder of the incision was closed with silver sutures.

At the close of the operation, shock was not great, pulse 134. Morphia was given and the patient passed a somewhat comfortable night. No vomiting.

Morning of 19th. Pulse 138; respiration 34; temperature 102° F. *Evening.* Pulse 140; respiration 30; temperature 102° F. Vomiting a little and abdomen somewhat distended. Face pale and features pinched. Three ounces of pinkish serum from tube. Vomiting checked by swallows of hot water, and a mixture containing creasote and sodii bicarb. Tube washed out with carbolized water.

Third Night. Restless with vomiting. Next morning. Pulse 150; respiration 26; temperature 101¾°; increased stimulants and at noon pulse was 138; respiration 26; temperature 100.6°.

Fourth Night. Slept some; less vomiting; she takes koumiss and retains it. Next morning. Pulse 140; respiration 20; temperature 100.8°.

Fifth Night. Pulse 120; respiration 22; temperature 101.8°; stronger. Three ounces of a somewhat offensive fluid were taken from the tube and bowels were moved spontaneously.

Sixth Night. She slept well. Pulse 114; respiration 23; temperature 101.2. Sutures removed; union complete. Tube slipped out and could not be introduced again. It left a canal with healthy granulating walls.

Seventh Night. Vomiting returned. She did not receive the usual amount of stimulants during the night. Exhaustion and vomiting increased, without additional rise of temperature and patient died on the ninth day. The death was doubtless due to exhaustion. The disease of the ovaries and of the peritoneum was doubtless colloid cancer. The tumors and the material removed from the peritoneal cavity weighed fifty pounds. It seems right to conclude that, had the tumors been removed in their earlier stages, the patient would have most probably recovered from the operation and have remained exempt from the disease months or years or perhaps permanently.

Dr. Montgomery spoke of the advantages of early operation before peritoneal involvement. He also alluded to the dangers of tapping. He gave a short history of a case of ovariotomy with colloid contents and recovery from the operation, but followed by death six weeks later from cellulitis and ascites, the cause being unknown.

Dr. Baer related a somewhat similar case in which the patient recovered, but is now apparently dying from a recurrence of the disease in the upper part of the abdomen.

Dr. Parish, in closing, said that the tapping was done with reluctance, but did no harm in this case. The peritoneal complication made the case hopeless.

OFFICERS FOR 1885.

President—B. F. Baer, M.D.

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Stated Meeting Feb. 5, 1885.

President, B. F. BAER, M.D., in the Chair.

CERVICAL PREGNANCY.

Dr. E.E. Montgomery read a paper in which he recounted the history of a case seen by him in consultation with Dr. Alexander. The patient had beeh pregnant eight times; the last labor had been terminated by forceps. The present pregnancy had lasted three months when she was taken with severe pain and quite profuse hemorrhage. An examination under ether disclosed that the cervix was distended, forming a globular tumor. The os, turned backward, was filled up with a tense membrane; breaking through it, the cervix was found to be a large cavity, in which was the fetus and its envelopes. The body of the uterus appeared like an excresence upon the distended cervix. It would admit a finger, and was lined by a decidua. The membrane below was continuous with the outer mucous membrane of the cervix, so that the remains of it hung as a fringe from the os.

This case differed from the few cases of this condition which have been described, in that there was no contraction of the os. In the majority of cases it occurs in primiparæ, and when discovered it was necessary to resort to artificial means to make an opening.

DISCUSSION.

Dr. Goodell remarked that he had no knowledge of cervical pregnancy. One case which was sent to him as such, was epithelial cancer of the cervix. How could such a case be diagnosticated without a post mortem examination? Dr. Montgomery's hypothesis of an arrested abortion is probably the correct solution of such a case as he has described. The fetus might be forced out of the body of the uterus and arrested in the cervix by an unyielding os or cicatricial bands. Some years ago a physician of this city who had a large obstetrical practice, borrowed his ecraseur for the removal of a supposed uteride polypus, which proved to be a fetus in its amniotic sac. Dr. Goodell had never been able to understand how an experienced man could make such a mistake, but the description of this

case of cervical pregnancy had thrown light upon the subject. Dr. Montgomery's description of the distended cervix would apply very well to a uterine polypus with a long pedicle, and a mistake in diagnosis might easily be made.

Dr. Montgomery questions the primary occurrence of cervical pregnancy. He believes the fetus has originally taken its seat in the body of the uterus, and has been forced into its lower position later; but it might be primary, the internal os being patulous, the same conditions that sometimes cause placenta previa might cause the entire fecundated ovum to be arrested in the cervix.

Ruptured Uterus.

Dr. B. F. Baer presented the specimens and related the history (which will be found in full in the *American Journal of Obstetrics.*) Mrs. F., colored, thirty-two years of age, married ten years, had borne four children at term, and had one miscarriage. The first child was forceps-delivered and was still-born. November 14, 1884, she was taken in labor; a midwife in attendance pronounced everything correct. After a few hours of severe pains, the patient "felt something break in the womb," and labor ceased, but was replaced by sharp pains all over the abdomen, and blood escaped in great quantity from the vagina. Collapse ensued, and she was thought to be dead; a slow reaction occurred and her attendants waited for labor to begin again. Dr. Fisher was called to see her ten days after the accident; he found her abdomen tender and tympanitic, a mass like the head of a fetus in the right hypochondriac region. The pelvis was empty. Temperature 103°, pulse 108, and small. Rupture of the uterus and escape of the fetus into the abdominal cavity was diagnosticated. Dr. Baer was called in and confirmed the diagnosis. The patient refused operative assistance, and preferred to die in peace, but five days later asked to be relieved. Preparations were made for laparotomy; an examination per vaginam revealed a gangrenous pus escaping freely, and the placenta loose and hanging from the vagina; the hand passed readily through the os uteri and through a tear in the right wall of the cervix into the abdominal cavity, and came upon the trunk of the child, which was extracted through the vagina by version by the feet; it was putrid. The parts were well irrigated with carbolized water and the hand again being introduced, entered an adventitious sac, and nowhere came in contact with intestines or other viscera. The uterus was well contracted and quite small. The uterus and sac were washed out with carbolized water until it returned pure. The patient died of septicæmia ten days after the removal of the fetus. Dr. Baer is in full accord with the principles advanced by Dr. R. P. Harris, in his paper entitled, "If a Woman has Ruptured her Uterus during Labor, What Should be Done to Save her Life?" (*Am. Jour. Obst.*, Oct. 1880, p. 809,) in which he advises that the abdomen should be opened and the peritoneal cavity thoroughly cleansed. In this case however

nature had protected herself by forming an adventitious cavity, and there could be no reason to open the abdomen to clean this out, as it could be reached from below more directly and without injury to the soft parts.

Dr. Henry M. Fisher: In Germany a distinction is made between lymphatic septicemia and phlebitic septicemia. In the first form the poison is absorbed by the lymphatics, and inflammation of the serous surfaces with exudation is the consequence. In the phlebitic form numerous emboli are formed, and hectic fever and local pus-formations, the result of these emboli, are found. At the autopsy in this case, pleural and peritoneal effusion was found. It will be remembered that peritonitis occurred soon after the rupture.

Dr. Goodell remarked that he had come intending to criticise Dr. Baer's treatment of this case for not resorting to laparotomy, but he found himself agreeing with both Dr. Harris and Dr. Baer. In recent cases laparotomy should always be performed, but in fifteen days an adventitious sac had been formed and the dangers to the patient would have been increased by the operation. He had seen two cases of rupture of the uterus, both of them occurring in the practice of a physician who never used obstetric forceps, and had to send four miles for a consultant. In the first case peritonitis rapidly supervened, the abdomen became very much enlarged, and the fetus could not be located by palpation. The abdomen was not opened; after long groping the fetus was found close under the diaphragm. He had great difficulty in extracting it, as the loops of intestines became entangled between its legs; the placenta was also found in the abdomen. In the other case the body of the fetus had escaped into the abdomen, but the head was still in the uterine cavity; it was delivered by forceps. Both patients died. In both cases it would have been far better to have opened the abdomen. (*Am. Jour. Obst.*, vol. x, 1877, p. 478.)

Dr. Harris is in accord with Drs. Goodell and Baer as to the proper treatment of the case reported. It was too late to do anything when the physician was called. The general opinion is coming around to his way of thinking concerning the propriety of laparotomy in all cases as soon as reaction from the shock of rupture and hemorrhage had been established. Of the cases reported after such treatment, fifty per cent have recovered. One woman is reported as rupturing the uterus in four successive labors, with delivery per vaginam, and without laparotomy, and she survived it all. But such a case is phenomenal. Three cases in Europe have been treated by removal of the uterus as in the Porro operation; they all died; there seemed to be no reason for such a method. In most cases the split extends through the cervix, and thus free drainage from the abdominal cavity is secured. One reason for closing the cervical rent by sutures is to avoid the danger of cancerous growths to which that lesion is supposed to give rise.

Dr. Longaker remarked that many of these cases died from the profound

shock and hemorrhage immediately following the accident. Two cases in his experience had died within two hours, one of them undelivered.

Dr. Baer was glad to hear Dr. Harris make the distinction as to the propriety of laparotomy in his case, where the patient was not seen until fifteen days after the accident, and was suffering from septicemia. He had intended to perform laparotomy and was prepared for it, but when he found the newly developed sac he changed his plan as he thought nothing could be gained by it.

Ovarian Cysts.

Dr. Baer exhibited two ovarian cysts. Mrs. B., widow, entered my private hospital Dec. 18, 1884. She commenced eight months before to suffer from frequent calls to micturition, with severe scalding pains, symptoms apparently of cystitis and urethritis. The uterus and ovaries were in good position and seemed normal, but two weeks later there was burning pain in both ovarian regions with a perceptible bulging, largest on the right side. The menses had ceased, and the doctor in attendance suspected pregnancy, but exposure was denied at that time. The abdomen enlarged rapidly, and the patient finally acknowledged the possibility of pregnancy, and thought she felt movements of the fetus. At seven months uterine hemorrhage commenced and continued every day; the mammæ were atrophied; there were no signs of the presence of a fetus; there was some fluctuation; the sound was passed, and the uterus found empty and not enlarged; the face was wasted and had an anxious expression, and the pulse was quick. A diagnosis of ovarian cyst was now made. A deep diagonal sulcus could be made out in the abdominal tumor, the largest portion being on the right side; the tumor was smooth-surfaced and without nodules. The cervix was soft, patulous, high up, and drawn to the left. When the tumor was moved, the uterus moved with it, as was shown by the handle of the sound. Immediate operation was advised and performed. Incision 3¼ inches revealed two large tumors; both were tapped; the left, which was free from adhesions, was easily withdrawn, its pedicle transfixed, ligated, and dropped. The larger tumor, though free from abdominal adhesions, could not be drawn out, and it was found to be very adherent to the uterus, which seemed one mass with it. As the fluid drawn from this tumor was clear, it is not improbable that it was a tumor of the broad ligament. It became necessary to enucleate the cyst, and a long gaping wound was left in the broad ligament; this was transfixed and tied as a pedicle, but after the final division had been made the ligature slipped, and the hemorrhage was immense; ten hæmostatic forceps were applied temporarily, and the bleeding points were firmly secured. The wound of the broad ligament was closed by ten interrupted sutures; the patient collapsed, and he feared she would die on the table, but she reacted, and recovery was uninterrupted; the patient sat up in two weeks. An incident which occurred on the fourth day shows the necessity for the proximity of

a physician or thoughtful nurse. A scream from the patient, the announcement of a sudden pain in the right side, the patient said something seemed pulling inside of her. Dr. Baer was near and was called; he feared internal hemorrhage, but at once inquired how long it had been since she had passed water—four hours. The catheter was immediately used and complete relief was secured. After this the catheter was not required until the tenth day, but from the tenth to the twentieth day there was entire inability to pass water except by assistance of the catheter. She went home on the twenty-third day.

The points of special interest in this case are:

1. The patient being entirely well, symptoms of gonorrhœa presented themselves, and were followed by

2. Amenorrhœa for seven months, followed by

3. Daily hemorrhages for one and a half months.

4. Ovaritis and large tumors forming in eight and a half months from the initial symptoms.

Dr. Beates: A young lady was obliged to separate from her husband one month after marriage, in consequence of domestic trouble; her menses continued regular, but her abdomen enlarged as rapidly as if she were pregnant; her health failed, and at the expiration of nine months an ovarian tumor was removed; recovery was complete and rapid.

In another case he found numerous omental and enteric adhesions which were easily separated, but pelvic adhesions required enucleation of the cyst, which left a large V-shaped wound in the broad ligament as described by Dr. Baer. Hemorrhage was very free; in trying to dissect off the tumor from the fundus of the uterus that organ was badly wounded; the cavity was opened, and required to be closed by sutures. Great tympany followed this operation, and breathing became almost impossible; the patient recovered.

Calculi in the Female.

Dr. J. W. Snowden exhibited the stones and related the history of the case. He was called June 1, 1884, to see Miss L., aged 23. Up to 13 years of age she was troubled with enuresis, wetting the bed almost nightly. After this she ceased passing urine during sleep, but was obliged to rise for this purpose two or three times during the night. She could not retain her urine night or day after the desire to pass it came on. If she could not reach a convenient place she would wet her clothes.

She married when seventeen years old. Two months after marriage she began to have cystic irritation and soon passed sabulous matter and small calculi. These symptoms continuously increased. Physicians whom she consulted said she had catarrh of the bladder, but none made an examination for stone. Once she was obliged to call on a medical man to remove a calculus which had become impacted in the urethra. Two years ago she spent a summer in New Jersey, during which time

she passed no gravel, but the irritation of the bladder continued. When I first saw her she was urinating very frequently with more or less pain. She passed stones daily with a great deal of sabulous matter. The urine looked as if there was a quantity of ordinary sand in the bottom of the of the vessel. I proposed an examination for stone, which she refused peremptorily. I gave her benzoic acid, which entirely stopped the passage of the sabulous matter and relieved her in every way, but she still occasionally passed a small calculus. This marked relief lasted two or three months when the irritation of the bladder became worse than ever. She could only pass her urine in the erect position and with as much effort as a woman in labor. I insisted upon examination for stone, but the slightest touch excited such intense pain even when she was well etherized that being alone I could not manage her and I sent for Dr. B. F. Baer in consultation.

A calculus measuring about one and a half inches in its longest diameter was found in the bladder and removed by Dr. Baer after rapid dilatation of the urethra. This afforded marked relief and she soon seemed entirely cured; but in a short time her urine began to dribble continually while she was in the recumbent position at night. During the day she retained and passed her urine naturally. I advised her to get up, at stated intervals, and empty her bladder, which has gradually relieved this trouble. She is now quite well except that she urinates rather more frequently than is natural.

NEW YORK ACADEMY OF MEDICINE.

Annual Meeting, Jan. 15, 1885.

The President, FORDYCE BARKER, M.D., LL.D., in the Chair.

DISEASES OF THE FALLOPIAN TUBES; THEIR RELATIONS TO UTERINE DISPLACEMENTS AND THE USE OF PESSARIES.

Dr. W. Gill Wylie read a paper with this title, in which he stated that since May, 1883 he had operated in fourteen cases for disease of the Fallopian tubes. Twelve of the patients recovered, and two died of septicæmia on the fifth day after the operation. Eight were cases of pyo-salpinx, two of hydro-salpinx, and four of catarrh of the tubes with peritoneal adhesions. With one or two exceptions there were extensive adhesions. Short histories of the cases had been given at the meeting of the Pathological Society the night before, together with the report of the microscopist, Dr. H. C. Coe; therefore he would now read only some of the more important parts of his paper.

With regard to the ætiology, anything which could cause endometritis might also induce disease of the tubes, and most cases of salpingitis were probably due to direct extension from the endometrium to the tube. Tubercular disease might also attack the tubes. No doubt gonorrhœa

was a very frequent but often unsuspected cause of salpingitis. Specific endometritis would in many cases, although treated with the greatest care, cause salpingitis and local peritonitis. It might also end in pyo-salpinx, but usually the tube became distended from the constriction of the proximal extremity, and the poison was liable to extend to the surrounding tissues.

Syphilis might cause salpingitis as it did otitis, etc. Septic poisons after abortion or labor were frequent causes of salpingitis. Obstructed effete matter within the uterus might be forced into the tubes. His experience had led him to attach more importance to local peritonitis than to local cellulitis; he did not believe in so-called chronic cellulitis. Diseased tubes were very commonly associated with diseased ovaries. When there was oöphoritis it might be regarded as due to the extension of the disease from the tubes and peritonæum. There were, however, certain diseases of the ovaries, such as cancer, which might cause secondary disease of the tubes. In hystero-epilepsy and hysteria, he expected to find cystic or atrophied ovaries following a catarrhal condition of the tubes. Hemorrhage into the tubes might cause more or less permanent distension.

The subjective symptoms were so varied, and salpingitis so frequently associated with uterine diseases that it was often overlooked or not distinctly made out. The principal subjective symptom was pain in the left iliac region. It was more marked in pyo-salpinx than in hydro-salpinx or catarrh of the tubes. Pyo-salpinx, especially if accompanied by abscess round the tube, caused very distinct local pain and more or less tenderness. The objective symptoms until lately had been regarded as only imperfectly clearing up the diagnosis, but when an acute case had become more or less subacute, and then cotton pledgets imbued with glycerine and alum were placed around the cervix two or three times a week, in from three to six weeks the condition of the patient would have so changed as to permit of a positive diagnosis in almost every case, especially with the aid of an anæsthetic. The author then sketched the pathology of the various affections of the tube.

As to treatment in cases where there were adhesions, and he was not allowed to operate, he would not use pessaries; he was satisfied if he could render the uterus movable, and thus, by improving the circulation in the pelvic organs, give more relief than with pessaries. He had succeeded in tapping in two or three cases in which he was not allowed to operate, and in one of the cases a cure was effected, but it was believed that the enlargement was an abscess formed in an old hæmatocele. The two other patients were benefited.

If disease of the tubes were clearly made out, and the patient was bedridden, complete removal of the tubes and ovaries only would give relief. In the operation the abdominal opening should not ordinarily be

made greater than the width of three fingers, thus guarding against ventral hernia. It was important, for the same reason, in closing the wound to obtain perfect apposition of the fascia as well as of the peritoneal surface. He gave the patient pancreatized milk during four or five days preceding the operation, to guard against distension of the intestines with gas. If the omentum appeared to be formidably adherent, by passing two fingers down the opening and moving them from side to side, one would be enabled easily to tear away the adhesions. It might, however, be necessary in some cases to tie the omentum above and below and cut a part away. In order to get at the ovary easily, and to obtain a suitable pedicle, the broad ligament should be unrolled.

Dr. E. Noeggerath said that if dislocation of the uterus was to be considered the result of salpingitis and peritonitis, the form of dislocation was latero-version combined with antero-version. He did not doubt that Dr. Wylie had seen cases in which a sufficient amount of plastic material was thrown out to carry the uterus backward, but such cases were exceptions. In ninety per cent. of the cases of retroversion he thought the uterus could be replaced and kept there by instruments, and the cases in which we could not replace because of posterior adhesions were very rare. In other words, a large percentage of retroversions were not accompanied by adhesions.

As to the diagnosis of salpingitis, those cases in which there was ordinary salpingitis with very slight exudation should be considered apart from those in which there was salpingitis in its later stage, pyo-or hydro-salpinx already being present. In the first place, it was not necessary to feel the tubes at all in order to make a diagnosis; if there was decided perimetritis with catarrh, with minute condylomata, about the hymen and labia minoria, we knew that there was also salpingitis, because the cases in which perimetritis existed without salpingitis were extremely rare.

With regard to the surgical diagnosis in case an operation was proposed, it was the shape of the tumor which was of the utmost importance. The tumor of salpingitis was very often not single, but divided into two or three sections, having the shape of a cone running in the direction of the lateral diameter of the pelvis. He believed with Dr. Wylie that in the extreme cases referred to no treatment other than an operation would prove successful. But the large majority of cases of salpingitis were not ready for an operation, and something else must be done. The treatment here would be very much like that described by the author of the paper, but that which he had found most efficient was the use of the waters of Franzensbad, in Bohemia.

Dr. A. J. C. Skene said that so far as his observation went, it was rare to see disease of the Fallopian tubes not preceded by gonorrhœa. But he differed with Dr. Noeggerath as to the rarity of pelvic peritonitis without disease of the tubes. In the diagnosis the practical difficulty seemed

to be to distinguish between a small ovarian cyst, more or less prolapsed, and pyo- or hydro-salpinx. He would inquire what might be the value of aspiration in diagnosis? If we found ciliated epithelium so generally present in pyo- or hydro-salpinx, what objection could there be to removing a portion of the fluid and examining it for diagnostic purposes? Out of twenty-one specimens which he had examined, in eighteen ciliated epithalia were found, indicating the condition present. As to treatment, it had been very well remarked that many patients were operated upon before other means had been exhausted. He thought that if a hydro-salpinx was aspirated the fluid might not reaccumulate, and the patient recover.

Dr. P. F. Mundé said the greatest difficulty he had met was in the diagnosis. In the cases which most required an operation, those in which the swelling in the pelvic cavity consisted of a diffuse fullness, the diagnosis was most difficult. He doubted whether we should be able to make a positive diagnosis until after laparotomy had been performed. As regarded the influence of inflammation of the tubes upon displacement of the uterus, he was disposed to agree with Dr. Noeggerath in his views of lateral displacements; but he had also seen some cases in which the uterus was retroverted, bound down, with marked salpingitis. He was rather disposed to think that they were as common as lateral displacements, and more common than anterior displacements. He agreed with Dr. Noeggerath that in the majority of cases of retroversion the uterus was not adherent. So far as treatment was concerned other than by laparotomy, he thought that we could do but very little. There were certain cases of diffuse swelling in which he had given the patient relief from pain by means of the galvanic battery.

Dr. Wylie was satisfied that if Dr. Mundé would adopt his preparatory treatment he also would be able to map out the exact condition of the pelvic organs in cases of salpingitis, and decide as to the necessity of an operation. As to treatment by aspiration, he thought that it would require more than the mere withdrawal of the fluid to effect a cure; it would also be necessary to have perfect drainage. In cases demanding an operation he thought the rule not to tap any abdominal tumor in which it was intended to perform laparotomy should be observed. With regard to retroversion associated with salpingitis, his experience had been that in women who had never borne children lateral version or anterior version was common; but in the majority of women who had borne children there was retroversion, especially if the salpingitis was due to septic endometritis extending to the tubes.—*N. Y. Med. Journal.*

THE Anglo-Swiss Condensed Milk, which is being advertised in this paper, has won the highest encomiums from the most competent authorities as being the best food made for infants and invalids. A treatise on this all-important topic will be mailed, free of cost, to all applicants by the Anglo-Swiss Condensed Milk Co., 86 Hudson st., New York City, or can be procured of druggists.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Meeting of December 18th, 1884.

Axis-Traction Forceps.

Dr. Papin.—Our young friend Dr. Endris is here who has brought with him from Europe some new instruments, and more especially a new axis-traction forceps, Breuss's, a modification of Tarnier's. He has with him a short paper which illustrates its history, and I move that Dr. Endris be asked to read his paper and show the instrument. (There being no objection Dr Endris was introduced and read a paper.)

Traction is made simply on the handle as in the original Tarnier, and the traction-blade serves as a guide like the needle in the original. In using this instrument there is no difficulty in exactly following the rotation and changing the position of the head in the pelvis.

Dr. Englemann.—At what time, if at all, is there any force exercised?

Dr. Endris.—We are not to touch the guiding bars, but simply hold the handle.

Dr. Englemann.—I am glad to see that this forceps has been presented because I had intended to show the Simpson instrument, which is constructed in the very direction illustrated in the forceps of Breuss. The original Tarnier instrument differs from the ordinary forceps in the axis-traction and in the curve. The curve has been lessened by degrees by Tarnier himself, but it has remained a marked characteristic of the instrument, even in its later forms. Most obstetricians are pleased with the axis-traction principle, because axis-traction has always been followed theoretically in manipulation. The principle is best expressed in Simpson's original forceps with axis-traction, and that I think is the instrument which is most used. We have had an application of the axis-traction principle to various instruments by different obstetricians, and have an expression of the same thing in Breuss's forceps.

Dr. Endris.—It is a Simpson's forceps with a modification by Breuss.

Dr. Englemann.—We see here a modification of Simpson's forceps, that is, his own instrument with the axis-traction principle, and I here show the Simpson instrument with another modification, but the very latest instruments take the shape of the original with this principle applied. The essential Tarnier modification, however, is this excessive curve. Tarnier himself has gradually lessened this in later instruments but retained it to a certain extent in his last. I presume he will retain it, because it is his principle; others are giving it up. I have seen no advantage from this immense curve even when the head is floating above the brim, and we are sometimes obliged to deliver under those circumstances notwithstanding the danger, and I have certainly brought living children through under those circumstances. In one case I applied this Tarnier instrument

with difficulty, upon a head floating freely above the brim and very movable, but fearing to use it on account of the curve, which was very different from the one I was accustomed to, I removed it and applied my own; the only difficulty that I found was in being obliged to lock the blades in the vulva, and that pressed them well down upon the perineum; there is the benefit of the Tarnier instrument in its original state. In the case in which I had them both applied, my own instrument locked in the vulva while the Tarnier instrument locked outside the vulva. There is no very great difference in these instruments; one locks just within the vulva and the other just without. But I say that in order to reach the head with my own instrument I was obliged to press very firmly down upon the perineum. The difficulty with these instruments which are intended for a head high up in the pelvis or above the brim, I think, is the insufficient distance of the lock; you will see the Simpson instrument locks in about the same manner as this. The fact that the lock is near the blade suggests the very difficulty which I have actually encountered. I should think that this would be a most admirable instrument, and in fact any of the forceps which we use would be most admirable with the axis-traction principle applied. Simpson deserves credit for having first applied the axis-traction principle to ordinary forceps. The axis-traction principle has been very universally adopted, and of course this instrument has nothing peculiar about it, except that it is the first forceps which has this principle adapted to the simple instrument without any modification. I have brought with me one of the older Tarnier's and one of the medium Tarnier's, in order to show the difference between them. They differ in the forceps blade but are similar in the traction appliances. Obstetricians have recognized the advantages Tarnier has shown in axis-traction, but are returning to the curve of the ordinary forceps. Here I show a German instrument with such a modification, and here is an English one. Tarnier himself has lessened the curve of his blade, so that obstetricians the world over are now returning to the original shape of the forceps while adding axis-traction.

Dr. Papin.—My friend Dr. Englemann seems to have overlooked a little modification in this forceps of Breuss, which is to me a neat improvement on Simpson's traction forceps. A Simpson's forceps applied in the superior strait will press against the perineum with danger of its rupture, while if we have to deliver at the superior strait this forceps supplies exactly the curve that is required, as in Hodge's old forceps. We may pull as much as we please, but we have the curve as a safeguard and the presure is not too great upon the perineum. This is an advantage of this forceps over the Simpson traction forceps. I have delivered in the superior strait a great number of times in the last 36 years, and I have always found Hodge's forceps to answer better than Baudeloque's or any English or French modification. I have tried the Elliott forceps, but it lacks the pelvic curve which the other forceps have. But with this instrument of Breuss

we always have a guide before us; we may pull as much as we please and as long as we follow the guide we cannot go wrong. When we have the head floating above the superior strait and we must necessarily deliver immediately, if we apply our forceps in this position, using Elliott's, Tarnier's or Simpson's, the curve is such that they press against the perineum because the traction must necessarily be downwards so as to engage the head below the symphysis pubis. Now with the Breuss forceps we have the proper curve, while the axis traction principle is applied just as in the Simpson forceps, and we are not in so much danger of tearing the perineum. This forceps is much superior to the axis-traction forceps of Simpson on that account; having once applied it to the head rotation can take place.

Dr. Prewitt.—I have listened with a good deal of interest to what different members of the Society have had to say about this forceps, and it seems to me like they were going back to an idea which looks to the inadequate qualification of the obstetrician. Now, I take it the action of this axis-traction is to guide the obstetrician in the direction in which he is to pull. The question in my mind is whether the accomplished obstetrician needs any help about that. A tyro might require it, but a good obstetrician hardly needs a guide to show in what direction to pull, and if he is guided simply mechanically, it is certainly not a scientific method of exerting force. It is too much like those surgical instruments which aim to accomplish the objects solely by mechanical methods without any regard to the skill and dexterity of the operator; like those trocar-tipped tracheal tubes which are intended to be pushed into the trachea, such things may be perfect instruments but are most unsurgical appliances. Now, if the obstetrician needs an instrument to guide him in what direction to pull, so far as the vertical action, if I may so term it, is concerned, then he ought to have another hinge in his forceps so as to allow the head to rotate upon the body while he is pulling. As the head must rotate he does not always know exactly in what direction to make this rotation. A pivot might be made here that would allow the head to rotate on the blades without the necessity of knowing anything about what was going on. I take it that the very best of all obstetrical appliances, if we could have it, would be an Indian puzzle-cap, that would fit upon the head, with which we could make traction.

Dr. Papin.—Will you please describe the Indian puzzle-cap?

Dr. Prewitt.—The Indian puzzle is a little apparatus which is stuck upon the finger, and the harder we pull the tighter it becomes. It is used in dislocations of the thumbs and fingers; we slip it on, and it is impossible to get it off by pulling. Now if this could be put upon the head, the rotation both lateral and vertical could be accomplished simply by the traction independently of the obstetrician. All that would be necessary for him to do would be simply to pull. Dr. Papin says that in these for-

ceps the advantage is in its application to the head above the brim of the pelvis; I think its most prominent feature is that it seems as a guide to the obstetrician in the direction he should pull.

Dr. Papin.—Not altogether.

Dr. Ford.—It is to enable him to pull in the proper direction when he cannot otherwise do so without much difficulty and some risk.

Dr. Papin.—I agree with Dr. Englemann that Tarnier's curve is here a very necessary thing when we are above the brim of the pelvis, and therefore in order to protect the perineum I pull in a proper direction, but as soon as I have engaged the head under the symphysis pubis I follow the handles because this direction is not necessarily vertical any more than it is longitudinal and upwards. The necessity of this curve is to protect the perineum when we are drawing straight down however slightly. I can put sufficient force upon any head there in that direction to draw it within the brim of the pelvis, if the pelvis is at all within the usual dimensions and the head is not hypertrophied beyond measure. Now I speak from experience; the force exerted is not necessarily very great, it is probably less there than at any other stage of the operation. Having once engaged the head under the symphysis pubis, all I have to do is to follow the handles as they go, and having made use of the curve that I have here in that direction, I need no other curve.

Dr. Prewitt.—Now, Mr. President, I must confess I cannot exactly see the philosophy of Dr. Papin's suggestion. Let us suppose that this forceps is applied to the head above the brim of the pelvis. The blades are curved especially for that purpose, and all you have to do is to pull downwards and forwards. The benefit of this curve is that it protects the perineum, but it is a very different curve from that of other instruments.

Dr. Papin.—The curve will fit the head above the superior strait. Now having once fitted it, it holds steadily and the head will prevent drawing against the perineum.

Dr. S. G. Moses.—It always struck me that in Tarnier's forceps the excessive curve was intended to prevent the necessity of pressing against the perineum.

Dr. Papin.—That is what I said. I think the forceps have some disadvantages with the head above the brim. To apply it above the brim we have to press against the perineum because this curve is very slight, and besides, this forceps is not arranged in such a way as to adapt itself to the head unless it is well up through the pelvic curve. Now having got the head in this position all we have to do is to draw in the axis of the superior strait in a perpendicular line or very nearly so. The needle of course in these instruments is intended to act as a guide, but it does not assist us in drawing from the superior strait at all. Of course as the head advances in order to rotate as we are obliged to do, we have to press severely against the perineum with any ordinary forceps, and obviation of this is the great

advantage of the Tarnier forceps in my opinion over the Hodge or any other forceps that I have seen in delivery above the superior strait.

Dr. Engelmann.—This forceps of Breuss is not intended to be used above the brim. I do not see that it has any feature that would make it meritorious or give any claims to use there. In the paper that has been been stated, as I am also well aware from my own experience and from teaching, that the instrument is not designed for use until the head is in the brim and fixed. This forceps has peculiar advantages in delivery and adapting itself to the head, but it makes no claims whatsoever to any advantages in applying it above the brim. And I think there is another point which can be made clear in the instrument, why it will not serve above the brim at all.

Dr. G. A. Moses—Dr. Engelmann has just remarked that this instrument was never intended to be applied above the brim; the length of the instrument proves this. The advantages claimed for the Tarnier forceps are not only axis-traction, but the large cephalic curve and also the perineal curve which permitted traction in a straight line. I have actually used the instrument but once, and that was to deliver a head above the brim. The instrument of Breuss shown here tonight has many ingenious features and would be an effective instrument in many cases for which Tarnier especially invented his forceps. The main advantage of Breuss' forceps would seem to be that the blades can be altered somewhat from their relative parallelism on the head. It is a light instrument and a strong one. The chief objection is this hinge located where it would be soiled, and I think it would be very likely to retain sources of sepsis. I would dislike very much to have to use it often. The principle of action here is exactly the reverse of that in Tarnier's, in which mobility was posterior, while in this it is entirely anterior.

Dr. Ford. —In Tarnier's forceps the blades remain unmoved, and in Breuss's are hinged.

Dr. S. G. Moses.—Accoucheurs have always exerted axis-traction; this is an old principle dominant ever since the forceps were invented. It has always been the practice of physicians to adapt the curve of the instrument to the position of the child, and this is merely a mechanical means which helps to guide the operator.

Vesico-Vaginal Fistula—Calculus.

Dr. Prewitt.—I have here a specimen. This is a stone which I removed from a vesico-vaginal fistula some six weeks ago. The patient was sent to me from South-east Missouri with a vesico-vaginal fistula for operation. She had an exceedingly offensive discharge, and her condition was very bad, and when I came to make an examination, the speculum grated against something, which upon examination proved to be a stone lodged in an opening between the bladder and the vagina near the cervix. After its removal a fistulous opening was left between the two cavities.

Dr. McPheeters. —Did it close the opening entirely?

Dr. Prewitt.—No, sir; it allowed the urine to pass constantly. The degree of inflammation about the parts was so extensive as to preclude the possibility of an operation, and I sent my patient home, directing her to use washes, etc., until the parts were in a better condition for operation. I did not notice particularly at the time the exact position which the calculus occupied. Of course the urine was alkaline and was filled with mucus. I have been in doubt whether this calculus was formed secondarily or whether it was in existence at the time of labor, which had occurred probably twelve months before I saw her. It seems to have been formed upon a uric acid nucleus, and it seemed to me not improbable that the calculus was in the bladder at the time of the protracted and I think an instrumental labor. It seems to me not improbable that the stone had something to do with the production of the fistula, and I don't know exactly how a calculus would have formed any such opening. I don't know how it was overlooked; it is probable it protruded into the bladder. It is mostly a phosphatic calculus and may have been the result of cystitis; it would then have been formed after labor and after the production of the fistulous opening, but if it had been the result of the alkaline condition of the urine it would have been a phosphatic calculus exclusively.

Dr. Papin.—In the spring of 1871 my friend Dr. Nagel called me to see a case on the Gravois road of a phosphatic calculus about three times as large as this, with a fistulous opening as large as the diameter of this stone. I crushed the stone within the bladder and washed it out and then turned my attention, as the doctor has done, to moderating the inflammatory condition of those parts with the view of closing the fistulous opening. In June I almost succeeded in closing the opening; only a little goosequill orifice remained. In the latter part of October I performed a final operation, and in three weeks afterwards sent her home. This woman had been confined to bed for seven years; I was her thirteenth doctor. She was so afflicted from the effects of the urine percolating along the walls of the vagina and vulva that she was at times unable to move herself in bed or to move her limbs. They had arranged a rope from the ceiling by which she pulled herself up. I was the discoverer of this calculus as far as I know.

Dr. Ford.—The connection between these calculi and vesico-vaginal fistulæ is very interesting. We know that they are of not infrequent occurrence, and indeed that they may occur in the bladder we have no reason to doubt in consequence of the displacement of the parts and of the cicatricial corrugations which are formed in consequence of the rents and lacerations. I think Dr. Campbell of Augusta, Georgia, has struck a very important note in this manner some years ago when he first expressed the opinion that in the great majority of cases the presence of the stone was the cause of the fistula by pressure and sheer laceration of the tissues and

by obstruction of the head in parturition. In several cases coming under my own notice I have felt convinced that there is a great deal of truth in the position, and I think that the profession is about to accept Dr. Campbell's idea, not as a universal thing, but as a condition in which in a certain number of unsuspected cases results in the production of vesico-vaginal fistula, viz., pressure of the head on the stone, by which sphacelation or direct laceration of the walls of the vesico-vaginal septum is induced.

PELVIC CELLULITIS.

Dr. G. A. Moses.—It might occur occasionally. If there is nothing before the house I might mention a case of cellulitis. Last summer a lady, a married woman, who had a child some two years previously and was delivered with forceps, called upon me to be treated for pelvic cellulitis, from which she had suffered to some extent after delivery. She had been subject, as was supposed, to violent neuralgic pains, particularly pelvic, but very often also abdominal; she was in the habit of using narcotics. I was called in during one of these supposed attacks of neuralgia. Not knowing anything about the history of the case, I took it for granted that she had been very subject to these attacks, although I could not trace them to any condition of the alimentary canal. As she was pregnant at the time, I gave her morphine, which she was in the habit of taking; and she supposed, as she had been subject to these apparent attacks of neuralgia, as she called them, that she had taken cold. The remedy relieved her temporarily, but on the following day I found that she was suffering again, and, making an examination of the abdomen I found considerable tumefaction above the pubes, and making an examination per vaginam I found the uterus exceedingly tender and quite enlarged. The increase of size of the abdomen had come on very suddenly; when I first called the abdomen was not perceptibly enlarged, but when I examined her afterwards it was as large as in the sixth or seventh week of pregnancy, possibly the second month. Dr. Boisliniere was called in consultation. There was a great deal of fever, with a very irritable stomach. Being pregnant, and with very extensive pelvic cellulitis, I of course expected an abortion, which took place without any particular trouble. The uterus assumed a fixed position; there was very little uterine discharge, and I thought perhaps under these circumstances by the use of antiphlogistic remedies and careful treatment she would recover. She went on from bad to worse, however, the abdominal effusion being increased. There was very intense pain, high fever almost septicæmic in character. Drs. Boisliniere, Gregory and myself thought it might be proper to make an effort to empty the abdominal cavity of the increased infusion. Dr. Gregory, with his usual conservatism and good judgment opposed an operation. She continued much the same, but with no increased effusion and with about the same condition of the pelvic cellulitis. The case went on for eight or ten weeks, she was very ill, and became much op-

posed to remaining in the boarding house where she was living; she wanted to go out in the country where her parents lived, but we were afraid that if we attempted to move her she would die in the attempt. However she was moved out into the country and I did not see her after she left. I have heard that she got worse and worse, became derilous and absolutely insane and continued in that condition for several weeks when she began to get well. I understand now that after five or six months she has probably passed the crisis, the effusion has disappeared, and that some of it has possibly escaped from the rectum and that she is now rapidly recovering.

DISCUSSION.

Dr. Papin.—What was the treatment?

Dr. G. A. Moses.—Various antiphlogistic remedies, mercurials, etc.

Dr. McPheeters.—Was much pus passed per rectum?

Dr. G. A. Moses.—I don't think there was much pus at any one time, but there was probably a gradual passage into the bowel so that it was evacuated; she was a very feeble, delicate looking woman.

Dr. McPheeters. — Did the recovery commence from the discharge of this pus?

Dr. G. A. Moses. — It was a very gradual recovery; I have not seen her since she went to the country. I think this is a very interesting case from the fact of its long continuance, the low condition and ultimate recovery.

Dr. Ford. — A lady has just placed herself under my care who states that about sixteen months ago, after lifting a heavy bucket of water, she felt something give way and felt badly afterward, although she had no chill, had no syncope, did not feel exactly weak nor go to bed. After two or three days she gradually felt worse, a cellulitis set in, from her description of the symptoms. Some days afterward she felt something give way in her abdomen and noticed, as she said, that she seemed to be "all loose inside, and when she turned over in bed it seemed as if something would fall." I have seen in one or two cases of hæmatocele such a symptom as this.

Dr. Papin. — There must be a considerable rupture of the connective tissue in order to have this perceptible rolling sensation.

Dr. Ford. — I recollect a case I had some time ago where a man and his wife were playing together; she made a pass and he jumped at her and they both fell, his knees striking her upon the abdomen. She happened to be at about her period, and I suppose there must have been fully a quart of blood effused into the peritoneal cavity, judging from the sounds on percussion and the physical spmptoms. This case was accompanied by the same feeling of swashing about.

Dr. Engelmann.—Dr. Endris has brought some other instruments which I think would be of interest to the Society, I will call attention particu-

larly to this cold water coil. I think I showed one several years ago to this Society, but this coil, you notice, instead of being made of rubber, is made of metal; while rubber is a non-conductor, this is not, consequently there is this advantage about the use of this metallic coil. By the use of this coil, which is very pliable and can be adapted to parts exactly, the temperature can be readily modified by causing the current to pass thro' it more rapidly. The coil is attached to a vessel of water which is elevated more or less according to the degree of heat or cold desired. — *St. Louis Courier of Medicine.*

OBSTETRICAL SOCIETY OF LONDON.

Meeting of January 14th, 1885.

DR. HENRY GERVIS, M.D., President, in the chair.

EXTIRPATION OF UTERUS.

Dr. Wm. A. Duncan described two cases of vaginal extirpation, and discussed the subject of extirpation in its various aspects.

CASE 1. The patient, aged 37, married, with one child 11 years old, was admitted to the Royal Hospital for Women and Children on December 11, 1883, with a slight attack of pelvic cellulitis. A few days previously, there was found a small growth of epithelioma on the portio vaginalis, near the os uteri, and only involving the anterior lip of the cervix. The attack of cellulitis passed away gradually, and on January 22, 1884, extirpation was performed *per vaginam*, according to Schroeder's method. Great difficulty was experienced in ligaturing the broad ligaments, which were shortened from the inflammatory thickening left. A double drainage-tube was inserted, and an iodoform plug in the vagina. The patient made an uninterrupted recovery, and was discharged cured on the thirty-ninth day with an arched cicatrix in the vagina, but no induration whatever. She was readmitted on June 14th with cough, pain over the lower ribs on the right side, night-sweats and pyrexia. On the 25th, an indurated mass was felt, on vaginal examination, above its roof; the pelvic glands were enlarged. The patient continued in much the same state, with intermitting pyrexia, the temperature remaining, as a rule, between 100° and 105°. She was discharged, at her own request, on July 16, and died at home on November 1st.

CASE 2. Mrs. P., aged 54, was admitted on February 4th, 1884, with ulcerating epithelioma of the cervix. She had been married thirty-two years, and had had eight children. She had been quite well from the menopause (ten years ago), until eight months before admission, when hemorrhage followed coitus. Vaginal extirpation was done on February 26th, as in Case 1. Collapse set in as soon as the peritoneal cavity was opened, and death took place twelve hours after operation. The author, having discussed the advantages and disadvantages of the abdominal and

vaginal methods, gave statistics of all the cases he could find, showing that, after 137 abdominal extirpations, there were 38 recoveries and 99 deaths, being a death-rate of 72 per cent.; whilst, after 276 vaginal extirpations, there were 197 recoveries and 79 deaths, being a death-rate of 28·6 per cent. The details of the after-treatment were then discussed, the author being of opinion that there was no necessity either to sew up the wound in the vagina, to put in a drainage-tube, or to plug the vagina; but he insisted on the importance of the free use of iodoform locally, of the upright posture for the first ten days, and of the free administration of opium. He next reviewed the various malignant and non-malignant diseases for which the operation had been done, and was of opinion that in none of the latter was it ever justifiable; that in sarcoma and carcinoma of the body of the womb and mucous membrane of the cervical canal, it was indicated; whereas in cancer of the portio vaginalis, for which it had frequently been performed, the death-rate was four times greater than after supravaginal amputation of the cervix, and the ultimate results were almost precisely alike (32 per cent. being free from recurrence two years later). Hence, in these cases, he argued that one was not justified in performing it.

Dr. Gervis, the President, expressed the thanks of the Society to Dr. Duncan for his paper, and for his kindness in having tables of the cases quoted printed for the use of Fellows. He indicated, as lines for discussion, personal experiences of the operation, and the pathology of the disease as bearing on the justifiability of the operation.

Dr. Braxton Hicks offered a word of caution in regard to accepting the evidence of the curette in cases occurring in the child-bearing period of life, since the mucous membrane of the uterus, under the influence of pregnancy and other stimulants, presented an appearance nearly, if not quite, like that of malignant disease. Again, sarcomatous polypi, which might return and yet ultimately cease, could not be distinguished by the microscope from truly malignant growths.

Sir W. MacCormac made some remarks.

Dr. John Williams thought that our knowledge of the operation was sufficient to enable us to form a judgment, at least as regarded the vaginal and abdominal methods. The abdominal method was far the more fatal (72 per cent.). It was as likely to be followed by recurrence as the other; it had, therefore, practically been discarded. After the vaginal method, the mortality was from 25 to 34 per cent. The author estimated it at 28 per cent., which was a little above the mortality of ovariotomy for many years after it had become a recognized operation, and this mortality might be considerably reduced. But the two operations were very different. If the patient recovered from ovariotomy, she was restored to health and strength, and so remained. After extirpation of the uterus for cancer, however, the disease recurs in a large number of cases within

six months, while very few remained free after two years, and only one has remained free for five years. Again, most of these cases were cases of cancer of the cervix, and not of the body; and supravaginal amputation gave better results than extirpation. This clearly limited the operation to cancer of the body. The diagnosis of this, however, presented difficulties. Dr. Williams had done the operation four times, and the only patient who recovered from it died a month later of fecal fistula, high up in the small intestine. The patient had been examined under ether, and the uterus was found freely movable, very slightly enlarged, and no growth could be discovered in the pelvis, nor any adhesions between the uterus and the surrounding organs; but at the operation, a soft adhesion was found between the fundus and a coil of intestine. The disease had passed through the uterine wall to the small intestine; and, three or four days after the operation, liquid feces passed by the vagina. Here the most careful examination failed to discover the extension of the disease beyond the uterus. Again, before a just opinion of extirpation could be formed, the course and history of cancer of the body must be better known. This disease was far commoner than was formerly supposed, and its course was longer than was believed. In the early stages of cancer, the pain was not severe, but became so after the disease had invaded the deeper tissues. Now, when recurrence took place after operation, the disease was placed at an enormous advantage; it recurred at the edge of the cicatrix, and at once attacked the deeper tissues, being associated with the severe suffering of an advanced stage of cancer. This meant that, after the operation, the patient had a few weeks or months of comfort and supposed freedom from disease; and then the disease returned, and occupied the position it would have occupied, after months of comparatively little suffering, had it followed its course unmolested; for the tissues through which it would have had to make its way had been removed by the surgeon's knife.

Mr. Knowsley Thornton expressed his agreement with the conclusions of Dr. W. Duncan, and also with the remarks of Dr. Williams. He was not an opponent of operations for cancer; in the case of the breast, it was possible to remove the whole disease and all suspicious glands. The surroundings of the uterus, however, were very favorable for the spread of cancer beyond the possibility of complete removal. He thought the attack of cellulitis in Dr. Duncan's case was very likely due to displacement of cancerous elements during examination, and might account for the rapid recurrence after an apparently successful operation. Here he must express his single dissent from the author; he believed the practice of curetting cancer of the uterus to be very dangerous, and apt to spread the disease. He had thought that the one possible indication for the operation was severe pain; but, after Dr. Williams' remarks, he was inclined to alter his opinion. Cancer of the body was slow in growth, and

he thought it was rarely painful as long as it was confined to the body. The fetor of the discharge might be controlled by insufflation of iodoform. In cancer of the cervix, extirpation was inferior to amputation of the cervix and the application of chloride of zinc. He preferred this method to all others, on account of the power which chloride of zinc appeared to possess of following up the cancer-elements and destroying them. Dr. W. Duncan had omitted one point—namely, the necessarily imperfect removal of the tubes by the vaginal method. As they were part of the uterus, any operation which left them behind must be imperfect. This condemned the vaginal method as completely as the frightful mortality of the abdominal method condemned that operation.

Mr. Doran believed that there were anatomical reasons against the extirpation of the cancerous uterus. Mierzejewsky and Lebec had shown that, in the connective tissue between the body of the uterus and the peritoneum, there was a dense network of lymphatics, whilst two wider lymphatic plexuses formed a collar round the uterine and vaginal portions of the cervix. The lowest of these communicated freely with the vaginal lymphatics. All these networks joined, and emptied themselves into two or three large trunks running to the obturator gland, passing along the lower border of the broad ligament. He had found that this gland soon enlarged in cases of cancer of the cervix, though not with the stony hardness like that of cancerous axillary glands, except in advanced cases, where the uterus was already fixed and deeply ulcerated. This disposition of the lymphatics favored the spread of cancerous elements, and the whole of the broad ligaments could not be removed.

Dr. Playfair agreed with the conclusions expressed in the paper. In the common form of cancer, in which extirpation was most likely to be of value, the diagnosis was uncertain till it was too late to operate. Apart from epithelioma, cancer of the cervix was always obscure till fixation occurred, which distinguished it from hyperplasia, etc. The progress of the disease was sometimes surprisingly rapid. In one case seen with Mr. Thornton, one week sufficed to fix a perfectly mobile uterus, and to veto the operation. Even in cancer of the body alone, he was doubtful if extirpation was justifiable. He then related a case in which he had suggested extirpation three years ago, and the patient was still alive in comparative comfort, the bleeding having been controlled by insufflation of iodoform and tannin. In epithelioma of the cervix, removal of the diseased tissue and the application of chloride of zinc was the best operation. He related a case in which the patient remained in comparative comfort four years after this operation, though the disease had recurred. In another case, though the case was well adapted for extirpation, he had advised Sim's operation. The patient went to Sir Spencer Wells, who had, at her request, extirpated her uterus. The disease recurred within a year, and she died. He had no doubt Sir Spencer Wells would ac-

knowledge, in the light of recent experience, that, if the patient had been let alone, or Sims' operation done, her expectancy of life would have been as good, to say nothing of the risks of the operation.

On motion of *Sir Spencer Wells*, the discussion was adjourned to the ordinary meeting in March.—*British Medical Journal.*

Abstracts and Selections.

I.—OBSTETRIC.

The Puerperal Fevers.—By Robert Barnes, M.D., in *The British Medical Journal.*

Whether there be a special puerperal fever, a fever *sui generis*, to be ranked with small-pox, scarlatina, typhoid, rubeola, or erysipelas, is a question still keenly debated. This question I propose to examine by the light of physiological study of gestation and puerpery, and the clinical observation of the disorders that characterize these two states.

We may clear the ground of one source of confusion by admitting that, if we postulate a fever to rank with scarlatina and the other zymotic fevers, then the existence of a special puerperal fever is not proved. But this is a very incomplete and unsatisfactory answer. Women die in childbed, and die in greater numbers than from any other cause, with fever of some kind. Therefore, we must enlarge the question, and ask of what nature is the fever or fevers which assail lying in women.

Clinical observation will teach us that there is not one puerperal fever, but several. Like Meigs and Arthur Farre, we must use the plural number, and give up the attempt to describe *a* puerperal fever. The task before us is only to be accomplished by a process of analysis. Thus, to set the problem as it comes before us at the bedside: On the third day after labour we find our patient exhibiting the common signs of fever. She has had shivering, perhaps. The pulse and temperature are over 100; the respiration is accelerated; there is, in short, if not puerperal fever, fever in a puerpera. Thus, by a transposition, or change of terms, we are in the presence of, not a defined specific fever, as the term puerperal fever would imply, but of an indefinite fever. And now our task is to find out what is the nature of this fever. This is to be done by a process of analysis or differentiation, calling to our aid the light that history and close observation of the process of the disease may throw upon the case.

In the first place, we may state two undeniable propositions.

1. The fever implies poison, that is, toxæmia.
2. The poison may have sprung up in the patient's own system, or it

may have been taken up from an external source. This great distinction is the first step in the process of differentiation or analysis. I long ago emphasized this division of fevers in the puerpera, by calling those which spring up in the patient's own system, *autogenetic*; and those which were due to empoisonment from without, *heterogenetic*. These terms have become classical, but their full meaning is not even yet appreciated.

Let us first examine the nature and production of autogenetic fevers. These lie at the very foundation of the whole question.

But we must start with a fundamental proposition which distinguishes the diseases of the gravida from the diseases of the puerpera.

The diseases of the gravida are diseases of high nervous and high vascular tension. The diseases of the puerpera are diseases of low nervous and low vascular tension. In the gravida, the balance of osmosis is centrifugal; in the puerpera, it is centripetal. The diseases of the gravida arise out of natural conditions exaggerated in intensity. Thus, the most striking examples of high tension in excess are seen in the albuminuria and eclampsia, and the hemorrhages of pregnancy. An active process of building is going on, and everything is made subservient to this work. But the moment this work is complete, the reserve process of demolition, and of carrying away the refuse, is begun. Absorption and excretion then are the ruling energies. Of course, an active absorption, commensurate with and subservient to the process of construction, goes on during gestation. But this is a very different thing from the absorption of the refuse stuff which, having served its purpose, has to be cast out from the body. This refuse-stuff, if not duly excreted, may be as poisonous as are the elements of urine if not duly excreted. Hence we see that, in pregnancy, thrombosis, phlegmasia dolens, and septicæmia are extremely rare, whereas, during the puerperal state, they are common.

We might add that the conditions which mark the diseases of the gravida also distinguish them from the diseases of all other persons.

Now we will briefly trace the puerperal process, which, if disturbed, may lead to autogenetic fever. The following are the factors to be taken into account.

1. There is the blood of the gravida modified by the processes of construction and nutrition of the embryo and uterus. They are: excess of fibrin, diminished proportion of red corpuscles, increased proportion of water, increase of white corpuscles. These characters are found at the time of labour; and the blood so constituted, differing as it does from the blood of woman in her ordinary state, is the blood in which are wrought the *post partum* and puerperal processes. Nor is the peculiar state of the blood all. The altered blood is associated with universal changes going on in the body. Tarnier reminds us that "Science records day by day new facts which lead us to conclude that, in the pregnant woman, there

is not a single fibre or a single drop of liquid which does not undergo some modification." If there have been much hemorrhage during or after the labour, the blood has become more watery and more charged with fibrin. The excess of albuminoid or colloid materials increases centripetal osmosis.

2. There is the fall of nervous and vascular tension, involving a change in the dynamic state of the circulation.

3. There is a period of comparative rest following labour, of preparation for the active processes of breaking up of the tissue used during pregnancy, now superfluous, and of casting out the refuse-stuff. This period may be stated to be about forty-eight hours. We rarely see evidence of self-empoisonment before the third day.

4. At the end of the second day, the process of disintegration of the uterus and other organs has begun. An immense revolution is at hand. The proceeds of the disintegration of the uterus and other superfluous structures are rapidly taken up into the circulation, and ought to be as rapidly converted and excreted. Absorption revives. The lymphatic vessels and venules have come into active function. If the lymphatic system and liver, especially, fail to modify the waste-stuff brought to them, so as to fit it to enter the circulating blood, then this unprepared, unmodified waste-stuff is noxious, poisonous. Hence one form of toxæmia.

5. But, even assuming that the waste-stuff enters the blood-mass properly prepared or digested, unless it be got rid of *pari passu*, there will be accumulation of waste-stuff in the system. This, again, is a form of toxæmia. Hence there must be easily working excretory organs; the lungs, kidneys, and skin, must be sound.

6. Now it is obvious that both the evils pointed out may co-exist, that is, the conversion of the waste-stuff, and the excretion may both be defective. Hence, already we see a complex toxæmia, purely endogenetic, derived from no external source.

7. Fresh dangers are at hand. It is a remarkable fact—not without practical interest beyond our immediate theme—that all the successive steps in the history of reproduction are marked by violent lesions of tissue, ruptures, or lacerations. The bursting of the Graafian follicle and ovary, the frequent rupture of the fourchette and of the hymen in coitus, the tearing of the cervix uteri during the passage of the child, the disruption of the placenta from the uterus, the laceration of the perinæum, are obvious illustrations of this proposition. Another fact, less obvious but even more constant than some of the preceding, is the violent bruising to which the parturient mucous tract is exposed during labour. A process which may be likened to glacier-action takes place. The mucous membrane in contact with the head glides down under the influence of friction, separating it to some extent from the submucous tissue. In this movement, the

connecting vessels are torn. Hence the ecchymosis commonly seen in necropsies about the cervix uteri and vagina, if performed within a week of the labour. Not only is there commonly found extravasated blood, but a quantity of effused serum in the stretched and torn connective tissue.

This condition of the mucous membrane has not hitherto, as far as I know, been considered. I am disposed, however, to think it is often the most important factor in the poisoning process. It is the most active and constant septicode or poison-route.

8. Here, then, are several roads open to the reception of poison from the mucous tract. If no poison collect on any part of this septicode receptive tract, the wounds heal readily and the door is closed. It matters little that there existed an extensive traumatic surface. But if blood or lochial discharge remain in the uterus or vagina, and air find its way into contact, decomposition takes place. A foul fluid bathes the wounded mucous tract, and at some point or other finds an entry into the system. This is still a form of autogenetic toxæmia, but it differs from that form which is the result simply of the accumulation of badly prepared or excessive waste-stuff in the blood, by the addition of foul stuff from the uterine discharges. The case has increased in complexity. There is, first, the fundamental state of the blood derived from the gravid process; second, the blood further modified by the waste-stuff from disintegration of tissue; and, third, there is the septic stuff taken up from the wounded mucous tract. Whenever the blood is poisoned, be it with septic stuff or other, the natural process of purification, of excretion of the waste-stuff, is obstructed; the balance between disintegration, absorption, and excretion is lost. The ample septicæmia then, as imagined and described, cannot exist.

9. The puerpera is still open to toxic invasion from other sources. Poisons altogether foreign to her may be brought into contact with the traumatic tract, and be absorbed. Thus, the cadaveric poison from dissecting may be inoculated by the finger used in examination; other poisons, the result of diseased action, clinging to the obstetric finger, may be inoculated in like manner; sponges or linen tainted with similar poisons have been the carriers of poison to the genitals. In some of these instances, it is probable that bacteria play an important part. Certain it is, that poisons may be inhaled.

Thus another complication is added. All the elements of blood alteration already recited are at work, and are intensified by the new poison from without.

10. Then the puerpera is peculiarly susceptible to the ingestion of the zymotic poisons; typhoid, variola, scarlatina, rubeola, erysipelas, act with special virulence in the blood of the puerpera. It has been the fashion to say that scarlatina in a puerpera is scarlatina and nothing more. It is something more. The scarlatina-poison finds in the puerperal blood,

loaded with refuse stuff which it cannot excrete, a medium specially favourable to the development of mischief. The subject may have had scarlatina before. She may have enjoyed the full degree of protection until she became pregnant. Under this protection, contact with the scarlatina-poison may have been harmless. If inhaled or otherwise absorbed, it failed to ferment. It was quickly eliminated. But, if this poison enter the puerperal blood, its elimination is arrested; the morbid train is fired. We have developed a form of toxæmia compounded of the autogenetic forms previously described, and of the scarlatina-poison. This is very different from simple scarlatina. In these cases, the characteristic rash and sore-throat are often wanting. It may be doubted whether the zymotic poison always goes through the successive stages of zymosis characteristic of the simple scarlatina. The poison works in a specially prepared field in a special manner. It throws out of order the puerperal process. It arrests or prevents the disintegration-process, the due absorption by the lymphatics, the modifying action of the lymphatic glands and liver, the excretory function of the lungs, skin, and kidneys. Thus we get a complex poison, which cannot be called waste-stuff poison, septicæmia, pyæmia, or scarlatina, but is a compound of all, and perhaps of some new innominate poison, the product of their inter-reactions.

11. Another factor must not be lost sight of. Emotional disturbances play an important part. An emotion storm may so affect the heart and nutrition that the blood curdles—clots suddenly. The influence of emotions upon secretion and excretion is well known in some conditions. It is not so well known in the puerperal state. But that it may and does profoundly impress the circulation, nutrition, and excretion, is certain. Emotion is in many cases the most conspicuous genetic cause of puerperal fever. Where it is not the primary cause, it may often be a secondary exacerbating cause.

We may summarise the forms of puerperal toxæmia under three heads.

1. The self-empoisonment resulting from the loss of balance between absorption of waste-stuff and its excretion. This may be called *endosepsis*, since the poison arises within the system.

2. Self-empoisonment from absorption of the foul stuff of decomposition in the uterus. This may be called *autosepsis*, since the puerpera takes poison of her own making. This is what has been more especially called septicæmia.

3. Empoisonment from foreign sources. This may be called *exosepsis*.

There may be a simple endosepsis, but autosepsis also implies endosepsis; and exosepsis is a compound of all three.

Endosepsis is not, I believe, communicable or infectious; autosepsis is. The discharges from one puerpera, which are capable of poisoning her-

self, may poison another puerpera. Exosepsis is doubly infectious; it is infectious as autosepsis and as a zymotic.

Let us endeavor to classify the various forms of fever that occur in the puerpera.

1. There is the simple excretory fever, the result of toxæmia induced by the retention in the system of the waste-stuff of involution.

2. Then there is the fever from toxæmia induced by the absorption of foul stuff from the parturient canal, either absorbed through the mucous membrane, or through the wounds made during labor. This is a compound toxæmia; it is so-called septicæmia, *plus* the toxæmia from retained waste-stuff of involution. The condition is now complex; and new combinations of the noxious elements may arise from their interreactions, which baffle analysis.

3. Limiting our inquiry for the present to the endogenetic and autogenetic fevers, we next find that the puerperal blood is variously affected by the poisons that enter it. In some cases the poison, entering by the lymphatics and veins of the uterus, finds the blood in a condition to resist general invasion of the circulation. The poison is more or less localized or spent upon the blood in the pelvic vessels, or in the uterine walls. In the first case, the ingested poison acts as a precipitant upon the hyperinotic blood and lymph, and we have clotting or thrombosis; that is, thrombotic puerperal fever, or phlegmasia dolens.

In the other case, the invading septic stuff, more or less opposed in its progress, causes inflammation in the veins, lymphatics, and other tissues of the uterus and broad ligaments, which is almost sure to extend to the uterine and pelvic peritoneum; hence we have the various forms of metritis, pelvic cellulitis or parametritis, and of peritonitis. These each, in some instances, retain their individuality, but more frequently they merge into combinations, and there result metro-peritonitis, inflammation of the broad ligaments and other tissues.

Sometimes the ingested poison breaks bounds, and affects the entire volume of the circulation. There are at least two conditions observed. In one, the poison pervades the whole system, causing fever, without any tangible tissue-change or inflammation. This may end in recovery, but not seldom it results in death. In the other condition, there is at first pelvic inflammation, metritis, or phlegmasia dolens; but under the continuous imbibition or generation of fresh poison, and the degraded condition of the blood, the local barriers that resisted the first impulse of the invading poison yield, and general toxæmia ensues. This again may issue in death at no distant day, or, if there remain a fair degree of resisting force, distant inflammations may arise, as synovitis, pleurisy, pneumonia, diffuse cellulitis and suppurations in various organs and tissues, sometimes designated pyæmia.

Then we come to the heterogenetic fevers. These may be divided into two classes.

1. Some are due to the inoculation of some foreign poison, as the necrotic poison taken from dissection, or some foul stuff, the result of animal or vegetable decomposition, brought into contact with the wounded parturient canal, or inhaled or swallowed. I suppose there are few who have not had reason to conclude that a puerpera inhaling sewer-gas has, in this way, contracted a fever. This is not necessarily typhoid, although I believe typhoid fever is propagated in this way. The distinction is proved as follows.

If the patient be removed from the influence of ordinary sewer-gas, she not unfrequently rapidly recovers, just as she may recover from that form of empoisonment which results from absorption of foul stuff from the uterus, if the supply of poison be cut off, by washing out the uterus; whereas, when she takes in the typhoid poison, she takes in a poison that ferments, that has reproductive power, and, therefore, produces a fever that runs its course.

2. The other class of poisons are the recognized zymotic poisons, as small-pox, scarlatina, rubeola, typhoid, perhaps erysipelas. These poisons, when they attack the puerpera, still so far preserve their special properties, that they run their course, if the patient survive long enough, and may propagate like disease to other puerpera, or non-gravid persons; but their ordinary clinical phenomena are often masked or changed by the reaction in the blood peculiar to the puerpera, so that the special poison is not always recognized at the time of clinical observation. Its true nature is only made out by tracing back the history of the case, or testing the subsequent action upon other persons. Thus one case of fever, provisionally called puerperal fever, will be traced back to scarlatinal infection, and will further prove its character by propagating scarlatina to other persons. Another case will be traced to erysipelas, and cause erysipelas in others.

From this rapid and imperfect sketch, it will be seen that the puerpera is liable to the invasion of a great variety of poisons inducing a variety of fevers, and that the one constant thing that specializes these fevers is the puerperal constitution.

I have not touched upon treatment. The question of the constitution of puerperal fevers is large enough for one address. It is by far the most important question. Prophylaxis is easier than cure.

The Administration of Alcohol to Parturient Women. — By Heywood Smith, M.A., M.D., Physician to the Hospital for Women and to the British Lying-in Hospital, in *Med. Press and Circular.*

From the time when through some inscrutable law a filiform cell of the male coming into contact with a simple primitive cell of the female, de-

termines in that cell an elective and developmental energy, differentiated from all other cell growths in its complexity, so that by multiple fissure and differentation of tissues it grows into the complete organism of an independent being, until the time when that new being ceases to derive its nourishment from the mother who gave it birth, such mother may, during all that period of eighteen months, be said to be *parturient.*

During this extended period of time she passes through several phases of constitutional energy, which may be divided into conceptive, gestative, parturient, puerperal and nutritive, to each phase of which life there appertains its own constitutional peculiarity, its physical development, its functional activity, its receptivity of impressions from without and its behavior under the administration of various foods and drugs.

It will be seen, therefore, that our subject will lead us to the consideration of several different vital conditions, and it will be my object, in as short a time as possible for its due elucidation, to glance at each of these several vital phases, and to see in what way the administration of alcohol acts in each, whether as a help or hindrance to the proper performance of healthy vital activity in the parturient woman.

And first in the conceptive phase. The phenomenon of "blushing," *i.e.* the reddening of the cheeks, and often the neck and breast in women is connected more or less with a similar "blushing," if I may so express it, of the ovary. The sexual orgasm is the highest, *i.e.*, the most intense expression of this symptom, wherein the active hyperæmia of the ovary leads, through the exaltation of the energy of the sympathetic system, to a relaxation of the arterioles of the superficies, and produces first a blushing and then a profuse perspiration. Similarly, though in a minor degree, transient, and, it may be, slight sensations, having relations more or less remote to sexual emotions, calling up the mental impressions of love, shame or mere embarrassment, are reflected on the skin of the upper region, and the passing wave of maidenly blush is the tell-tale of the mental impression produced.

These transient ovarian blushes or temporary congestions, when occurring with a frequency that is beyond what may be deemed normal, tend eventually to set up disease in those glands; and we not unfrequently see, where the sexual feelings have been called forth and then repressed, as in an engagement to marry suddenly broken off, that a train of mischief is set up that tends to the development of ovarian tumor. Hence, long engagements are physically bad, and breaches of promise fraught with actual harm.

Alcohol administered in sufficient doses relaxes the superficial arterioles and also, in some way, whether directly through the brain or reflectively through the sympathetic system, gives increased energy to the organs of reproduction. Hence the misery and crime that so often are the outcome of indulgence in alcoholic beverages, as witnessed by the increase of im-

morality at seasons of special festivity, a tendency that is too often set forth by the ribald songs that disgrace such seasons of debauch. The total abstinence from alcohol would, therefore, do more to keep women pure, humanly speaking, than any sort of argument or bushels of advice.

We now come to the gestative stage, where a woman is bearing about in her body a complex organism, to a certain extent independent of her, and yet in a way that we scarcely recognize, dependent upon her health and self control for its growth, development and even future moral being. How important, therefore, nay, necessary, is it that the parturient woman should keep herself from all impressions from without, and from all morbid suggestions from within that might tend to mar the well-being of the treasured life of which she is now the temporary casket. Yet in many cases how great is the temptation, yielded to too often, consequent on the morbid ideas that not infrequently seem inseparable from the parturient state, to neutralize the depression of spirits by indulgence in alcohol, and the patient, for such she becomes, excuses herself with the idea that she wants *keeping up;* or domestic surroundings, or even the dislike to having many children, so preys on her mind that she flies to alcohol as a fortifier, or to render her perverted imaginations less obnoxious to herself. I once attended a lady, the wife of a member of Parliament, and therefore in good position, who in several succeeding pregnancies, and, I believe, then only, took to drinking, and so far was she influenced by depression of spirits, that she was most importunate, as was also her husband. that abortion should be produced in order to save her from the inordinate craving.

Now, it is of the greatest importance that the pregnant woman should maintain perfect health, but as the administration of alcohol supplies an extra hydro-carbon for the production of animal heat, either more caloric is produced than is needed or there is an accumulation of unconsumed hydro-carbons that clog the system as fat, renders the woman less active than she ought to be in that condition, and, it may be, acts on the fetus deleteriously by disturbing the balance of health in the mother's blood on which it draws for its ever increasing growth. A pregnant woman should therefore avoid alcohol in order to maintain her digestive functions in the state of highest efficiency, considering that she is responsible to her husband, the commonwealth and her God to nurture and protect to the utmost of her power the new life that is springing up within her.

Next in order comes the parturient phase. As in the vegetable kingdom there is a period of impregnation, then of growth, and lastly, of maturation and separation from the parent plant, the duration of each stage varying according to its special cycle, each after its kind—so is the fruit-bearing in the animal kingdom. To each order is its own appointed cycle, each after its kind. In the vegetable kingdom there arrives a period of time when degeneration takes place in the connective tissue that binds

the woody fibre of the stalk of the ripening fruit to the parent stem, until the time arrives when the force of gravity overcomes the cohesion of the parts, and the apple falls. So in the animal kingdom there comes a time when, the fruit being ripe, a degeneration takes place between the outer layer of the egg and the containing matrix, and the uterus, no longer recognising the fœtus as an inherent part of its organism, deems it a foreign body, and proceeds to throw it off. The process calls forth considerable muscular and nervous energy, which necessitates the highest functional health of the animal, and it proceeds by rhythmical efforts, accompanied with suffering. Now, alcohol is an anæsthetic, and Dr. Prince, of Jacksonville, Illinois, has recently published some observations on its action during operations, the mode of administration being both by imbibition and by rectal enemata.

The reports of our midwives and others practising among the poorer classes reveal the sad fact that women not unfrequently during the parturient stage are more or less under the influence of alcohol in some form or other, with the view partly of stimulating the action of the womb, and partly of relieving pain. But that is no reason why the husband and the select circle of assisting (?) female friends should also reduce themselves to a condition of helpless anæsthesia! In common with other anæsthetics, alcohol, when pushed in its administration, causes a relaxation of nervous and muscular energy, and so leads to the possibility—or, rather. probability—of hæmorrhage. If, therefore, the parturient woman has good health and sufficient fortitude, it is better for her, in all respects, to abstain from the use of anæsthetics.

Following the parturient effort, we arrive, fourthly, at the puerperal stage. And here, following the advice of officious friends, the patient may be induced to imagine she has need of some "pick-me-up" to sustain her strength, and repair the exhaustion of labour. In such cases the exhibition of alcohol leads to dire results. For, on the completion of labour, there commences the process of involution of the uterus; and this process is carried on by means of fatty degeneration of the contractile tissue of the organ, which is eliminated partly through the secretion of the milk, and partly by the combustion of the fatty elements maintaining the general heat. But the presence of alcohol retards the process, as the hydrocarbon alcohol is more easily burnt off than the fatty hydrocarbons; and the retardation of involution, recognized by us as subinvolution, leads to the permanent enlargement of the uterus, and all the evils that follow in its train, as chronic cervicitis, misplacements, and prolapsus. Aiding this tendency to subinvolution is the want of proper, healthy, tonic contraction of the uterus, inducing in some cases too profuse a sanguinary discharge, and paving the way for the too ready absorption of septic material.

The atony resulting from chronic alcoholism may lead also to passive congestion of various outlying parts, as venous inflammation with white

leg, mammary abscess from chill more easily affecting the part having its vascular system relaxed and engorged, and to a low type of inflammation affecting the uterus itself. A woman will, therefore, best pass through the puerperal state who abstains wholly from alcohol.

Fifthly, and lastly, we come to the consideration of the nutritive phase of the parturient woman—the period of suckling. And here a popular fallacy has worked untold mischief. Nearly all women believe that they cannot give a full supply of milk unless they imbibe several pints of porter or other alcoholic beverage *per diem*. Some of you may remember a picture of Leech's in *Punch*, illustrating nursery French, where a small boy, asking the maid to bring his mother, who is depicted with her infant, her morning glass of frothing porter, says—"*Apportez ici le porter de mamma, et designez le avec une tête.*"

Now, nothing is more untrue nor deleterious than the habit that this fallacy engenders. I have often found—and I speak from experience—that when mothers have been bad nurses, the scanty supply of poor milk could be traced to frequent glasses of sherry or other hurtful alcoholic beverages; and have seen, when all such have been laid aside, that the supply of milk has been improved both in quantity and quality. "A lean cow is a good milker" is an adage the truth of which all farmers can bear witness to; and the same may also, as a rule, be said of women. But the fattening tendency of the chronic imbibition of alcohol militates against the woman being a good nurse; and, moreover, some of the poison, passing rapidly and unchanged through the system, passes into the milk, and so the helpless infant becomes an early toper, and might—who knows?—suck in with its mother's milk an hereditary predisposition for the cup that "mocks" and "takes away the heart."

I trust that I have in this short paper proved that the administration of alcohol to parturient women is an unmitigated evil: that in every stage through which she passes it is fraught with the gravest results, both near and remote; and that he does best for those feeble ones committed to his care (as the weaker vessels) who steadfastly, himself conscientiously convinced of the importance of the subject, sets his face to warn women from the pitfall at the brink of which they may be standing, and to point their minds to a higher channel for satisfaction, and their bodies to a purer beverage.

I cannot conclude without one further remark: that we must not be narrow-minded, nor be carried away with the idea that because a particular drug is poisonous, it is therefore to be eliminated from our materia medica. With such a show of unreason should we abrogate the use of opium or blue pill. There are undoubtedly cases that call for alcohol either in its pure form or wrapped in the tonic properties of some wines (where such can be procured unadulterated), and he would be equally to be blamed if, from a mistaken prejudice, he refused to administer it when

the requirements of the case demanded, as he who withheld opium in a case of peritonitis.

He is a wise warrior who in his battle against disease in all its varied forms, knows best how to choose his weapon, and recognizes the opportune moment for using it.

Four Consecutive Twin-pregnancies.—On the evening of December 17th, I delivered Mrs. O., aged 29, the wife of a small farmer, living about two miles from my house, of twins.

In conversation, I found that this was the fourth time in succession that she had been delivered of twins. She was born September 15th, 1855; married June 1st, 1871, at the age of 16 years, and had been delivered in order of the following.

1.	1872.	July 27	... Girl.
2.	1874.	March 11	... Boy
3.	1876.	Jan. 18	... Boy.
4.	1877.	Oct. 7	... Girl.
5.	1880.	Aug. 24	... Twins; boys.
6.	1881.	March 12	... Twins (fourth month); boys.
7.	1883.	April 6	... Twins; boy and girl.
8.	1884.	Dec. 17	... Twins; girls.

All the children, with the exception of the one born 1874, who died in convulsions in 1876, and the children delivered in 1881, are living and healthy.

There was, in each case of twins, but one placenta. I may add, that the left hand of the first child born December 17th, 1884, is absent, the ends of the radius and ulna apparently having no covering but connective tissue and skin.

The mother of Mrs. O. had twins on two occasions, with two single pregnancies between.

I can find no recorded case of four consecutive twin-pregnancies.—JOHN HANNAY, Hinton, Salop., in *British Med. Jour.*

Delivery of the After-Coming Head.—Frendenberg (*Archiv. f. Gynäk.*, Band xxi. Heft 1).—This paper is based on most elaborate statistics of twenty-one years' cases in Birnbaum's clinique, and the statistics are particularly fully worked out. The author arrives at the conclusion that the best method of delivery is what is known as the Prague method, consisting in placing the right hand on the shoulders of the child, with the fingers on the occiput, and extracting with the left hand by means of the feet, downward and up over the mother's abdomen; and he considers that, should this method fail, resource should at once be had to the forceps, for the use of which he lays down the following general indications: 1. In backward rotation of the occiput and extension of the chin

under the symphysis pubis; 2. In backward or lateral rotation of the face, with lack of flexion and with impaction; 3. Where speedy delivery is called for; 4. Where the rima pudendi or vagina is narrowed, or will not yield readily; 5. Where the hand is tired from attempts at manual delivery; 6. Where the head remains in the pelvis rotated to the side; 7. Where, from the side of the mother, rapid delivery is indicated from metrorrhagia, eclampsia, etc., the child being dead and manual delivery failing.

The contra-indications are: 1. Spasmodic contraction of the os around the neck of the child; 2. Pelvic deformity of high degree; 3. Great size of fetal head.—*Edinburgh Medical Journal.*

Hegar's Method of Diagnosing Pregnancy during the Early Months with Certainty. The sign on which Prof. Hegar comments (*Annales de Gynécologie*, Sept. 1884) is a peculiar softness, a certain subtleness, and a thinning of the lower segment of the uterus—*i.e.*, of the part of the uterus immediately above the insertion of the sacral uterine ligaments. This condition can be easily verified, not only when the uterus is resistant, as is usual, but still more so when it is elastic and soft. Even in these cases it is possible, by depressing the lower part of the uterus, to distinguish it from the superior parts, and from the rigid cervix. The softness of this is such that one might imagine that the cervix was simply in contact with a pelvic or abdominal tumor. We do not know what pathological condition of the womb can present such symptoms. The cause of this remarkable sign exists in the fact the inferior segment of the uterus becomes during pregnancy the finest part, the softest, and the most elastic. It thence results that, in practicing the rectal touch with abdominal palpation, it is possible to feel between the fingers this portion of the uterus with the characters it presents.——*London Medical Record.*

Vomiting of Pregnancy—Dilatation of the Cervix Uteri.—W. Gill Wylie, M.D., Professor of Gynecology in the New York Polyclinic and Gynecologist to Bellevue Hospital, New York, terminates a communication on the above subject with the following conclusions:

1. That nausea and vomiting, or morning sickness in pregnancy, should not be considered and treated as merely one of the symptoms of pregnancy, but, as a rule, as indicating an abnormal condition of the tissues of the cervix uteri, due to imperfect development, disease, or the effect of disease on the tissues of the cervix.

2. That any pathological state which interferes with the softening and other changes which the cervix undergoes during pregnancy may cause nauseal vomiting.

3. That in most cases relief is obtained by freely dilating the cervix uteri below the os internum, and in many instances it is the only means

by which relief can be had. It is true that inducing abortion will give relief, but to accomplish this the cervix must be dilated.

4. That in many cases specific medicines given by the mouth are useless, and, as a rule, should not be used until a local examination is made and the indications for local treatment ascertained.—*N. Y. Med. Record.*

Beer in the Severe Vomiting of Pregnancy.—In the *Russkaia Meditz*, No. 28, 1884, p. 582,, Dr. O. Rodzewicz of Orenburg, describes two severe cases of vomiting of pregnancy, where the patients in the third and fourth month vomited almost hourly, and sickness completely disappeared from the next day after the patients had commenced to drink beer.

The successful cases communicated by Dr. Rodewicz induced Dr. P. Polansky, of Nijni-Novgorod, to try beer, a glass at dinner and supper, in the case of a primipara aged 25, in early period of pregnancy, with eight to ten daily attacks of vomiting. On the first day of the treatment the patient vomited only once, after which the sickness disappeared and did not return, although the treatment was continued for only four days.—*London Medical Record.*

II.—GYNECIC.

On Gonorrhœal Affections of the Uterine Appendages and their Operative Treatment.—Centralb. fur Gyn., No. 41. 1884.

Sänger thinks these have not received the attention which they deserve. Their frequency is fully one-ninth of all the gynecological cases, and as regards severity, they are unquestionably the most frequent of the severe forms of pelvic mischief. He divides gonorrhœal ailments into (1) those of the urethra, the bladder and the kidneys; (2) of the vulva and its glands; (3) of the vagina and the uterus; (4) of the uterine appendages. The last he divides into those of the Fallopian tubes (salpingitis, pyosalpinx, perisalpingitis); of the ovary (perioöphoritis, oöphoritis, and abscess of the ovary); of the broad ligaments (cellular inflammation, perimetritis, abscess). All these forms may be single or double, and complicated with perimetritis.

As regards diagnosis, the discovery of the gonococcus would seem to throw light on doubtful cases, but if the question as to whether these gonococcus are specific or not hinges on their penetration into the tissues, we have not gained much, as we can scarcely cut out pieces of tissue to insure certainty. In most cases the history and clinical condition are enough to establish the diagnosis. There is no doubt, however, as to the microbic nature of gonorrhœa.

In order to diminish the frequency of gonorrhœal infection in women, Sänger recommends general prophylaxis. Unfortunately, both the laity and even the profession are not aware of the pernicious nature of gonorrhœa. Doctors should take every opportunity of forbidding marriage un-

til all traces of the disease are gone. He gives a case where two years after infection an inflammation of the prostate set in. The wife contracted gonorrhœa and became sterile. Special prophylaxis should consist in more vigorous treatment of the affected woman. It is perfectly well known that prostitutes' colic is simply a severe form of gonorrhœa.

For the treatment of gonorrhœa of the urinary organs Sänger recommends daily washing out with solutions of corrosive sublimate. In gonorrhœal catarrh of the vagina and uterus, sublimate solutions of 1 in 1000 do good service. After these have been used for some time recourse may be had to nitrate of silver in solution, alcoholic solutions of iodine or dilute nitric acid. The best way is to inject these remedies into the uterine cavity. Care must be taken to completely empty the uterus, in order to diminish the risk of setting up metritis.

As regards the gonorrhœal affections of the uterine appendages, extirpation comes into play. Complete removal of the tubes is necessary for the success of a salpingotomy. Quite recently the operation has been frequently done in cases of pyosalpinx, and still more frequent have been oöphorectomies, with removal of greater or less portions of the tubes, in cases of oöphoritis and perioöphoritis. In such cases a combined operation —a salpingo-oöphorectomy—is often necessary. The objection that the disease may be kept up after the operation by the uterine mucus membrane is of no value, because as it alone has to be dealt with, and it is easily accessible to treatment, a definitive cure is easily attainable.

In conclusion, Sänger described four operations conducted by him in such cases. In one case the results were perfect. In two other cases there was some perimetritic exudation, in which, however, absorption afterwards set in. In his fourth case there is still great exudation, the results being as yet comparatively negative.—*Manchester Med. Chronicle.*

Hydrochlorate of Cocaine in Obstetrical and Gynecological Practice.—The remarkable results following the use of the hydrochlorate of cocaine in ophthalmic surgery have suggested the employment of this drug in a wide range of surgical conditions. Solutions of cocaine have been used in minor operations with varying degrees of success. It has been shown by numerous clinical facts that the sensibility of mucous and cutaneous surfaces may be entirely blunted by the application of solutions of two and four per cent. strength. The amount of insensibility is influenced by the strength of the solution and the number of applications. When employed topically, insensibility does not seem to extend into the subcutaneous or submucous tissues. This fact has limited its anæsthetic use chiefly to minor surgical operations. Solutions of the drug have been injected hypodermically into the deeper tissues with the effect of diminishing insensibility to a greater or less degree according to the nature of the tissues into which it was introduced. Abundant testimony is offered to show

that the drug is not only a "boon" to the oculist, but that it will render valuable services to the surgeon in general practice, and to the obstetrician and gynecologist.

The use of cocaine in obstetrical practice has been chiefly limited to the vaginal mucous membrane during the second stage of labor. A number of reports have been made of its application to the vagina and vulva with the result of diminishing the sensibility of these parts and thereby lessening the tearing and lancinating pains occasioned by the passage of the child's head. It has been employed successfully during the operation for the restoration of the perineum immediately following labor. An aggravated case of vomiting of pregnancy due to an eroded cervix has been reported as relieved by the application of the cocaine to the eroded surface.

The writer has employed a four per cent. solution in a case of laceration of the perineum in which denudation of the surfaces of the wound was required preparatory to the closure of the perineal body. No pain was experienced during the paring of the tissues, though some pain was experienced during the introduction of the sutures. The patient bore the latter pain comparatively well.

The cocaine solution has been used in performing Emmet's operation, by several operators, with fairly good results. It was found necessary to make frequent applications during the passage of the needles through the deeper tissues. A case of vesico-vaginal fistula has been reported as having been performed after repeated paintings of the surface with a four per cent. solution.

Dujardin Beaumetz has reported a case of vaginismus treated with cocaine with good effect. This authority pronounces, as the result of numerous observations, cocaine hydrochlorate to be the best therapeutic agent in this affection when due to inflammation and ulceration of the vulvar orifice. A case of exaggerated pruritus vulvæ, in which the usual remedies had failed, is reported as immediately relieved by the application of a four per cent. solution by Dr. Sarah J. McNutt, of New York city (*N. Y. Medical Record*, Jan. 3, 1885, p. 123).

In dysmenorrhœa a four per cent. solution applied to the cervical canal has been followed with marked relief.

The writer has had occasion to employ a four per cent. solution with marked benefit in the following condition: A patient with a very acutely retroflexed uterus of some years' standing suffered with great hyperæsthesia of the entire uterine canal. The simple introduction of the uterine sound occasioned great distress, and produced nervous manifestations of a most unpleasant character. It was extremely difficult to induce the patient to submit to local treatment. Attempts to replace the uterus by posture and manipulations with the finger were unavailing. A four per cent. solution was introduced into the uterine cavity, first by the use of

the syringe, and afterwards by means of the applicator wrapped with absorbent cotton and saturated with the solution. With two applications of the solution, at intervals of ten minutes, the sensibility was so diminished that Emmet's elevator was introduced and the uterus restored to its proper axis without the patient's knowledge of the fact.

These results suggest a wide range of conditions in which cocaine may be successfully employed in obstetrical and gynecological work. The numerous cases of hyperæsthesia of the female generative organs. whether due to neurotic or inflammatory conditions, will most probably yield to the local application of the cocaine solution, and thus admit of the use of instruments and applications which were deemed impractical without anæsthesia. We would suggest its trial where pain and distress are occasioned in the examination and treatment of highly nervous and sensitive patients.—*Maryland Med. Journal.*

Treatment of Retro-Uterine Hemorrhages.—As is well known regarding the treatment of retro-uterine hemorrhages, the doubt still exists whether laparotomy or the vaginal opening of the blood tumor merit the preference. Martin represents the views of those who think that by laparotomy they are better able to remove thoroughly all blood-clots from the sac than can be done by elytrotomy (opening per vaginam).

P. Zweifel (*Deutsche Med. Zeitung*, No. 100, 1884, December 15) has recently investigated the subject. He believes that from a theoretical point of view the adherents of Martin were right, but that practically the scraping of the sac could be done with the same ease and thoroughness if performed per vaginam. He recommends an opening of two or three fingers' width in the vagina, and says that with a cautious use of the dull curette the danger of hemorrhage need not be apprehended.

In laparotomy the surgical injury is greater, the operation more complicated, and the transfer of the contents of the tumor into the abdominal cavity scarcely to be avoided. Regarding statistics, the figures thus far still are rather small, but as they go, they doubtless speak in favor of the operation per vaginam. The cavity can be emptied with the same ease and disinfection of it, as well as any local application of whatever kind may be performed with far greater security, there not being the risk of either the contents of the sac or of the injected fluid entering the peritoneal cavity. Where, therefore, no special reasons, as abnormal position of the implicated parts, contraindicate the operation, the opening of the sac should always be made from the vagina, and laparotomy performed only in specially selected cases which do not permit the other method.—*Med. and Surg. Reporter.*

Treatment of Cholera.—In view of the expected visit of the cholera to this country during the coming year, any contribution to medical literature

bearing upon the treatment of this disease should receive careful and earnest consideration on the part of the medical profession.

By the researches of Dr. Koch it is now known that acids are most useful to kill the cholera microbe, and have been successfully employed by the profession in Europe.

Dr. Chas. Gatchell, of Chicago, in his "Treatment of Cholera," says: "As it is known that the cholera microbe does not flourish in acid solutions, it would be well to slightly acidulate the drinking water. This may be done by adding to each glass of water half a teaspoonful of Horsford's Acid Phosphate. This will not only render the water of an acid reaction, but also render boiled water more agreeable to the taste. It may be sweetened if desired. The Acid Phosphate, taken as recommended, will also tend to invigorate the system and correct debility, thus giving increased power of resistance to disease. It is the acid of the system, a product of the gastric functions, and hence will not create that disturbance liable to follow the use of mineral acids."

The following case is reported from Bangkok, Siam, and may be relied on as authentic: About three months ago a native was attacked with cholera. An American missionary attended him and administered all medicines he could, but at last the man was so far gone that they gave up all hopes of recovery, and would do no more. Relatives of the patient begging the doctor not to give him up as lost, the doctor thought of Horsford's Acid Phosphate. After the second dose the patient commenced to revive and in six hours after, he was pronounced out of danger.

III.—DISEASES OF CHILDREN.

The Bacillus of Infantile Diarrhea.—Truly the bacillus craze is being run into the ground. In the pages of our esteemed contemporary, the *London Medical Times* (January 3, 1885), we read as follows:

"There seems to be no end to the varieties of bacilli. The latest addition to bacillology, if there be such a science, comes from France. At a recent meeting of the Societé de Biologie, MM. Clado and Damaschino announced that they had discovered the bacillus of infantile diarrhea. This bacillus is about three times the size of the tubercle bacillus, and is six times as long as it is broad. It is a little curved, sometimes becoming crescentic in shape. The numbers found in any given case were in direct proportion to the severity of the disease. They were never found in the interior of the cells or epithelial masses, but always in the interstices. It was in the cases of green diarrhea that the bacilli were found, and they disappeared as recovery took place, and the stools improved from green to yellow. The authors promise that they will shortly make known the results of their cultivation experiments, which are being vigorously pursued."—*Med. and Surg. Reporter.*

An Establishment for the Artificial Nourishment of Children. (Jahrb. f. Kinderh. [from Deutsche Med. Wochen., 38, 1883], B. XXI., H. 4)

At the *hospice des enfants assiste's* there has been for the past two years a separate department, consisting of two rooms which are separated by a corridor, the latter leading directly to a stable, in which five asses are kept with their foals. In each room there is accomodation for four attendants and eight infants. The department is mainly used for those children who are the victims of hereditary syphilis, and they are suckled by the asses five times by day and three times by night. The quantity obtained at each nursing, as ascertained by actual weights, varies between thirty and two hundred grams. One ass will furnish nutriment enough for three infants, what is left going to the foal. Children who are fed in this way do remarkably well as compared with those who are fed upon cow's milk. The author says that seventy per cent. of them survive, while of those who are fed with goat's milk eighty-two and six-tenths per cent. die; hence the desirability of enlarging the field of action in this unfortunate class of patients.—*Archives of Pediatrics.*

Epistaxis in Children.—(Semaine Medicale.) In a clinical lecture on this subject Dr. Rendu mentions two cases then under treatment in the Hospital des Enfants-Malades.

The first case is that of a young boy in whom the loss of blood was great and continued for three days. No local cause could be discovered, and the real cause lay in a dilated heart, the result of mitral incompetence following upon acute rheumatism. A mild attack of rheumatism, occurring while the lad was under treatment, confirmed the diagnosis.

In the second case the epistaxis lasted four days and was attended with some rise of temperature. Shortly after admission to the hospital the flow of blood ceased simultaneously with the appearance of the characteristic eruption of measles.

After stating that epistaxis is very rare in children under two years of age, and becomes more and more common as puberty is approached, Dr. Rendu goes on to discuss its causes:—

1. Inflammatory conditions of nasal mucous membrane—rare, unless there be violent efforts to blow the nose.
2. Polypus: (*a*) Mucous, rarely causing epistaxis.
   (*b*) Fibrous, a common cause.
3. Foreign bodies, by producing ulceration, often after the body has been for a long time lodged in the nose.
4. Mechanical violence, especially the introduction of the child's own finger.
5. Whooping cough.
6. Heart disease with hypertrophy; the immediate cause being often sudden variation of temperature or atmospheric pressure.

7. Eruptive fevers. Common in measles before the appearance of the rash, very rare during the period of eruption, again occurring as a "critical" discharge as the rash begins to fade.

In scarlatina only occurring in the hæmorrhagic variety or during post-scarlatinal nephritis.

Common in smallpox in children as in adults.

In erysipelas, common if the nose be involved.

In enteric fever only in one-fifth or one-sixth of the cases, and then usually only very slight (Rillet et Barthez).

In diphtheria (*a*) when the nose is involved, and often (*b*) independently of local cause.

8. Diseases in which the blood is much altered, *e.g.*, scurvy, purpura, ecthyma. In purpura it is of grave import, and is not in proportion to the cutaneous affection.

9. Diseases of liver. Rare since cirrhosis is rare in children. It occurs in the cirrhosis of heart disease, and at times accompanies severe jaundice.

10. Acute renal disease.

11. Spontaneous epistaxis occurring (*a*) in girls before the catamenia are established, and now and then alternating with the menstrual flow; and in boys of the same age of gouty parentage, who subsequently suffer from hæmorrhoids. (*b*) In gouty and rheumatic children; often brought on by some very trifling cause such as over-fatigue or dyspepsia. (*c*) As a result of masturbation.

According to Dr. Rendu epistaxis accompanied by general malaise, but without fever, is generally due to some arthritic diathesis; whereas that which is attended by rise of temperature usually ushers in some eruptive fever or gastric disturbance.

In the commencement and at the crisis of fevers épistaxis often acts very beneficially, hence the value of leeches at these times. In scrofulous subjects it is rare, except as the result of some local affection.—*Manchester Medical Chronicle.*

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The Principles and Practice of Gynecology. — By Thomas Addis Emmet, M.D., LL.D., Surgeon to the Women's Hospital of the State of New York, etc., etc., etc. Third edition. Thoroughly revised. One hundred and fifty illustrations. Philadelphia: Henry C. Lea's Sons & Co. 1884.

To compare a new book with an old book is not always so easy a matter. Emmet's wonderfully extensive book has already become classic, and whatever additions this present volume may present simply rounds

out the proportions of the first edition. We have had occasion to use the instructions and advice of the earlier editions in the management of important operations, and always with success. This edition simply adds the experience of the profession and of the author up to this date. S.

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It is now one hundred years since the well known and well established publishing house of Lea. Bros. & Co. was established by Matthew Carey, a native of Dublin, born in that city in 1759. It is with commendable pride that the present proprietors — the lineal descendants of the original house — now present the history of the house in a neat little brochure. Amid the various changes made necessary with passing years, it is shown that the house has always borne an honorable name, and that their publications have conduced to the higher education of the people. As publishers of medical works, to which the house has long been devoted, they are well know as issuing the best standard works of the American profession. S.

Diseases of the Urinary and Male Sexual Organs.—By WILLIAM T. BELFIELD, M.D. New York: William Wood & Co., 56 and 58 Lafayette Place. 1884.

The Therapeutics of the Respiratory Passages. By PROSSER JAMES, M.D., Lecturer on materia medica and therapeutics at the London Hospital Medical College, etc., etc. New York: William Wood & Co., 56 and 58 Lafayette Place. 1884.

A Manual of the Medical Botany of North America. — By LAWRENCE JOHNSON, A.M., M.D., Lecturer on medical botany, Medical Department of the University of New York. New York: William Wood & Co., 56 and 58 Lafayette Place. 1884.

These three volumes complete the series of the Library of Medical Authors, as issued for several years so successfully by Wm. Wood & Co.

1. The volume devoted to diseases of the urinary organs and male sexual diseases, by Dr. Belfield, does not contain anything especially new upon the topics presented — the best, perhaps that can be claimed is that old and well established views of the nature and treatment of these two groups of diseases are well and clearly presented. Besides, the whole matters are given with commendable brevity, a feature that will be agreeable to the busy doctor.

2. The Therapeutics of the Respiratory Passage is well given, and in the same condensed style as characterizes the book just named. All matters pertaining to hygiene, to various foods, are detailed in an instructive manner; so too, the various drugs that may be found useful, as well as their place—iron, phosphorus, alcohol, etc; neurotics, expectorants, etc. The busy physician will find many useful hints for practice.

3. The closing volume for the year is really a very beautiful one, and makes a fitting close to the series for 1885. The first forty-eight pages are devoted to a consideration of the elements of botany, presented in so plain a style as to be within the comprehension of the most hurried reader. Then follows a dictionary of botanical terms which will be convenient to every reader. The remainder of the book gives in proper groups all the medicinal plants of North America, the botany, habitat, parts used, constituent preparations, medical properties and uses. The whole text is abundantly illustrated with engravings, together with nine very beautiful lithograph pictures. S.

LISTERINE.—As a deodorant and antiseptic for the sick room and dentist's office, Listerine stands pre-eminent. While it is equal to any and superior to most of the agents commonly used under such circumstances, it adds an agreeable aroma instead of an offensive odor to the surroundings; and is particularly well adapted to the lying-in room. It may be freely used in spray or lotion without stain or irritation, as an agreeable and effective detergent. It is also specially commendable in weak solution, as a mouth wash or gargle for aphthous sores, or a fungus condition of the gums, and bad breath; and for certain forms of indigestion—those accompanied by disagreeable eructations—a few drops of Listerine in water swallowed is a particularly grateful and excellent remedy. Moreover, according to a series of "Experiments upon the Strength of Aniseptics," by Dr. A. T. Cabot (Boston *Medical and Surgical Journal*, Nov. 27, 1879), Listerine compares favorably with the most reliable agents for the rapid destruction of micro-organisms —*The Sanitarian*, Oct., 1884.

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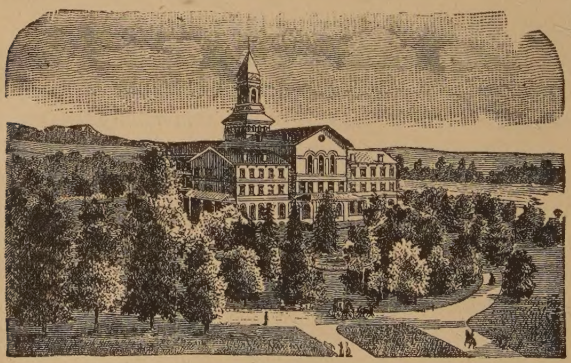

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